MERIDIAN™

YACHTS

490 PILOTHOUSE OWNER'S MANUAL

Date of Purchase: _____

Port Engine Serial Number: _____

Starboard Engine Serial Number: _____

Hull Identification Number:_____

Hull Identification Number

- The Hull Identification Number (HIN) is located on the starboard aft corner of the hull.
- Record the HIN (and the engine serial numbers) in the space provided above.
- Please refer to the HIN for any correspondence or orders.

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All Meridian products meet or exceed USCG (United States Coast Guard) and/or NMMA (National Marine Manufacturer's Association) construction standards. Manufactured with 1,1,1 Trichloroethane, a substance which harms public health and environment during the manufacturing process by destroying ozone in the upper atmosphere.

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Part Number
1882669

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Hazard Boxes & Symbols

The hazard boxes and symbols shown below are used throughout this supplement to call attention to potentially dangerous situations which could lead to either personal injury or product damage. Read ***all*** warnings carefully and follow ***all*** safety instructions.

⚠ DANGER!

This box alerts you to immediate hazards which *WILL* cause severe personal injury or death if the warning is ignored.

⚠ WARNING!

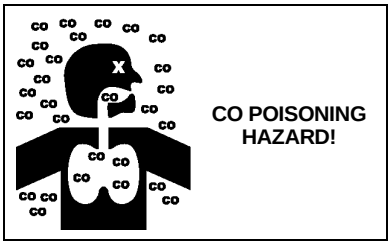
This box alerts you to hazards or unsafe practices which *COULD* result in severe personal injury or death if the warning is ignored.

⚠ CAUTION

This box alerts you to hazards or unsafe practices which *COULD* result in minor personal injury or cause product or property damage if the warning is ignored.

NOTICE

This box calls attention to installation, operation or maintenance information, which is important to proper operation but is not hazard related.



Chapter 1: Welcome Aboard!

- This *Owner's Manual* provides specific information about your yacht that is ***not*** covered in the *Cruiser & Yacht Owner's Manual Supplement.*
- The *Cruiser & Yacht Owner's Manual Supplement* contains general information about safe operating practices, general boating regulations, and general maintenance techniques. Information that is more specific to your particular yacht is found in this *Owner's Manual*.
- ***Before*** using your yacht, study this *Owner's Manual,* the *Cruiser & Yacht Owner's Manual Supplement,* and ***all*** engine and accessory literature carefully. If similar instructions are found in more than one manual, ***always*** refer to the specific manufacturer's manual (such as the engine manual) for the most complete and accurate information.
- Keep this *Owner's Manual* and the *Cruiser & Yacht Owner's Manual Supplement* on your yacht in a secure, yet readily available place.

Dimensions & Tank Capacities

Overall Length	Length Rigged	Bridge Clearance	Beam	Draft (Hull)	Draft (Maximum)	Fuel Capacity	Freshwater Capacity	Holding Tank Capacity
47' 4"	54' 0"	18' 2"	14' 11"	2' 11"	3' 4"	444 Gallons	200 Gallons	48 Gallons

Dealer Service

- Your dealer is your key to service.
- Ask your dealer to explain ***all*** systems ***before*** taking delivery of your yacht.
- Contact your dealer if you have any questions or problems with your new yacht.
- If your dealer cannot help, call our customer service hotline: 360-403-2198 or send us a FAX: 360-403-1158.
- Buy replacement parts from any authorized Meridian dealer.
- You can access on-line parts catalogs, links to vendor websites, and other helpful features by logging on to www.meridianyachtparts.com.

Warranty Information

- Meridian offers a Limited Warranty on each new Meridian purchased through an authorized Meridian dealer.
- A copy of the Limited Warranty was included in your owner's packet.
- If you did not get a copy of the Limited Warranty, please contact your Meridian dealer or call 360-403-2198 for a copy.

Boating Experience

⚠ WARNING!

CONTROL HAZARD!

An experienced operator *MUST* be in control of your yacht at *ALL* times. Do *NOT* operate your yacht while under the influence of alcohol or drugs.

If this is your first yacht or if you are changing to a type of yacht you are not familiar with, for your own comfort and safety, get handling and operating experience ***before*** assuming command of your yacht.

Take one of the boating safety classes offered by the U.S. Power Squadrons or the U.S. Coast Guard Auxiliary. For more course information, including dates and locations of upcoming classes, contact the organizations directly:

- U.S. Power Squadrons: 1-888-FOR-USPS (1-888-367-8777) or on the Internet at: http://www.usps.org
- In Canada, for the CPS courses call 1-888-CPS-BOAT.
- U.S. Coast Guard Auxiliary: 1-800-368-5647 or on the Internet at: http://www.cgaux.org

Outside the United States, your Meridian dealer, national sailing federation, or local boat club can advise you of local sea schools or competent instructors.

Qualified Maintenance

⚠ WARNING!

To maintain the safety of your yacht, allow *ONLY* trained personnel to do work on, or change, in any way, the:

- **Steering system**
- **Propulsion system**
- **Engine control system**
- **Fuel system**
- **Environmental control system**
- **Electrical system**
- **Navigation system**

- Failure to maintain your yacht's systems (listed in the warning above) as designed could violate the laws in your jurisdiction and could expose you and other people to the danger of bodily injury or accidental death.
- Follow the instructions in this *Owner's Manual*, the *Cruiser & Yacht Owner's Manual Supplement*, the engine owner's manual, and ***all*** accessory literature.

Structural Limitations

The bow platform, swim platform, and command bridge are designed to be lightweight for proper yacht balance. The load limit for these structures is 30 pounds per square foot, evenly distributed.

Engine & Accessory Guidelines & Literature

NOTICE

***BEFORE* starting or working on your engine(s), read the engine manual.**

NOTICE

***BEFORE* using the accessories on your yacht, read the accessory manuals.**

NOTICE

***BEFORE* storing your yacht, refer to your engine and accessory manuals for storage/ winterization instructions.**

NOTICE

Certain modifications to your yacht *WILL* result in cancellation of your warranty protection. *ALWAYS* check with your dealer *BEFORE* making any modifications to your yacht.

- Your yacht's engines and accessories were selected to provide optimum performance and service.
- Installing different engines or adding accessories may affect your yacht's running trim.
- If you choose to install different engines or add accessories that may affect your yacht's running trim, have a trained marine technician do a safety inspection and handling test ***before*** using your yacht again.
- The engines and accessories on your yacht have their own manuals. Read these manuals ***before*** using the engines and accessories.

Unless noted otherwise, ***all*** engine and accessory literature referred to in this *Owner's Manual* is included in your owner's packet.

While the topics listed below may be included in this *Owner's Manual* and in the *Cruiser & Yacht Owner's Manual Supplement*, ***always*** refer to the engine manual first for specific information on these important subjects:

- Engine Break-in Procedure
- Engine Starting and Stopping
- Gear Shifting
- Fuel and Oil Recommendations
- Engine Maintenance
- Engine Storage/Winterization

Propellers

⚠ CAUTION

ENGINE DAMAGE HAZARD!

The factory standard propellers may not be the best for your particular yacht and load conditions. Refer to the engine manual for engine RPM ratings. The engines should reach, but *NOT* exceed the full rated RPM when full-throttle is applied.

Immediately contact your local Meridian dealer if:

- **The engines cannot reach the full rated RPM when full-throttle is applied, or;**
- **The engines exceed the full rated RPM when full-throttle is applied.**

- Keep the propellers in good repair and at the correct pitch for your particular situation.
- A slightly bent or nicked propeller will adversely affect the performance of your yacht.

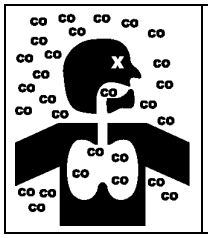
Safety Standards

⚠ DANGER!

FALLING and ROTATING PROPELLER HAZARD!

- ***NEVER* allow anyone to ride on parts of your yacht *NOT* designed for such use.**
- **Sitting on seat backs, lounging on the forward deck, bow riding, gunwale riding or occupying the transom platform while underway is especially hazardous and *WILL* cause personal injury or death.**

⚠ DANGER!



FALLING, ROTATING PROPELLER and CARBON MONOXIDE POISONING HAZARD!

- ***NEVER* allow anyone to occupy, or hang from, the back deck or swim platform while the engines are running.**
- **Teak surfing, dragging, or water skiing within 20 feet of a moving watercraft can be fatal.**

⚠ DANGER!

PERSONAL SAFETY HAZARD!

- ***ALWAYS* secure the anchor and other loose objects *BEFORE* getting underway.**
- **The anchor and other items that are *NOT* properly secured can come loose when your yacht is moving and cause personal injury or death.**

⚠ WARNING!

A wide variety of components used on this vessel contain or emit chemicals known to the State of California to cause cancer and birth defects and other reproductive harm.

Examples Include:

- **Engine and generator exhaust**
- **Engine and generator fuel, and other liquids such as coolants and oil, especially used motor oil**
- **Cooking fuels**
- **Cleaners, paints, and substances used for vessel repair**
- **Waste materials that result from wear of vessel components**
- **Lead from battery terminals and from other sources such as ballast or fishing sinkers**

To Avoid Harm:

- **Keep away from engine, generator, and cooking fuel exhaust fumes.**
- **Wash exposed skin thoroughly with soap and water after handling the substances above.**

- Your yacht's mechanical and electrical systems were designed to meet safety standards in effect at the time it was built.
- Some of these standards were mandated by law, and all of them were designed to insure your safety and the safety of other people, vessels and property.

Read this *Owner's Manual*, the *Cruiser & Yacht Owner's Manual Supplement*, and ***all*** accessory instructions for important safety standards and hazard information.

Special Care for Moored Yachts

- Whether moored in saltwater or freshwater, your yacht will collect marine growth on its hull bottom.
- This will detract from your yacht's beauty, greatly affect its performance, and may damage the gel coat.
- There are two methods of slowing marine growth:

1. Periodically haul your yacht out of the water and scrub the hull bottom with a bristle brush and a solution of soap and water.
2. Occasionally reapply the anti-fouling paint on your hull bottom. How often your hull needs new anti-fouling paint depends on many factors. Ask your selling dealer or local marina for advice.

Sacrificial Anodes (Zincs)

NOTICE

- **Do *NOT* paint between the zinc and the metal surface it contacts and do *NOT* paint over the zincs.**
- **If the zincs are not bonded correctly, they will *NOT* provide protection.**

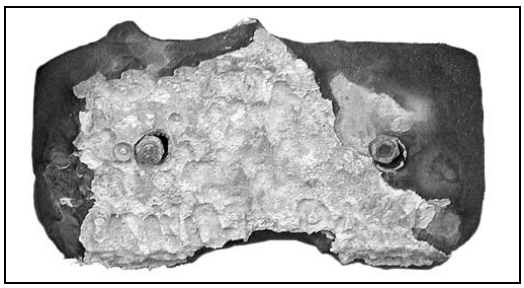
Your yacht features sacrificial anodes (zincs) to protect underwater metal parts from excessive deterioration. Check the zincs regularly and replace them if they have deteriorated more than 70%.

There are many factors that affect the rate at which the zincs deteriorate, including:

- Water temperature
- Salinity
- Water pollution
- Stray electrical current

Stray electrical current from your yacht, another boat, or the dock may cause complete deterioration of the zincs in just a few weeks. If there is rapid zinc deterioration, measure the electrolytic corrosion around your yacht with a corrosion test meter.

NEW SACRIFICIAL ANODE



DETERIORATED SACRIFICIAL ANODE

Yacht Lifting

⚠ WARNING!

PERSONAL INJURY and/or PRODUCT or PROPERTY DAMAGE HAZARD!

- **Lifting slings can slip on the hull, which could cause serious injury or death.**
- **Reduce the risk of sling slippage by *ALWAYS* securing the lifting slings together *BEFORE* lifting.**

⚠ WARNING!

PERSONAL INJURY and/or PRODUCT or PROPERTY DAMAGE HAZARD!

***NEVER* lift your yacht using the cleats.**

⚠ WARNING!

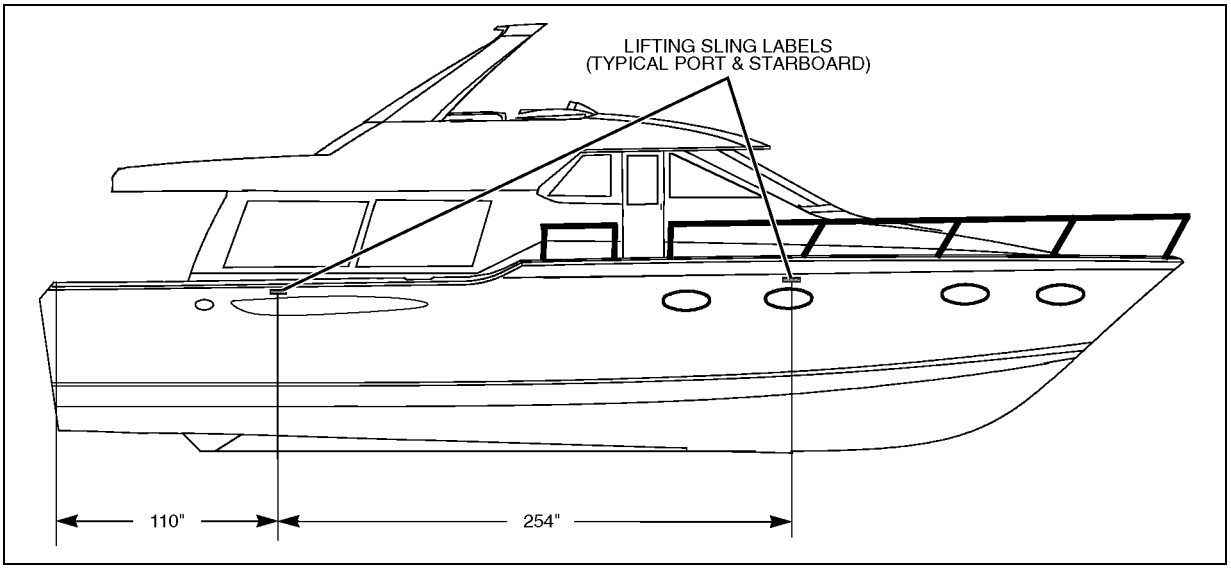
PERSONAL INJURY and/or PRODUCT or PROPERTY DAMAGE HAZARD!

- **Water in the bilge can shift and change the balance of the load.**
- **If water is present in the bilge, pump the water out of the bilge areas *BEFORE* lifting your yacht.**

⚠ CAUTION

PRODUCT or PROPERTY DAMAGE HAZARD!

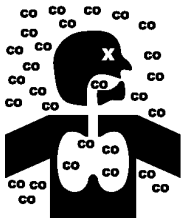
- **When lifting any boat, *ALWAYS* use a spreader bar.**
- **The spreader bar *MUST* be equal to the width of the boat at each lifting point.**
- **Make sure your yacht remains level during lifting. Engines can be damaged by water ingestion if the stern is lifted higher than the bow.**



- ***Always*** follow the lift equipment's instructions and requirements.
- When lifting your yacht, ***always*** position the lifting slings at the port and starboard lifting sling label positions, as shown in the illustration.

Carbon Monoxide (CO)

⚠ DANGER!



- **Carbon monoxide gas (CO) is colorless, odorless, tasteless, and extremely dangerous.**
- ***ALL* engines, generators, and fuel burning appliances produce CO as exhaust.**
- **Prolonged exposure to low concentrations or very quick exposure to high concentrations *WILL* cause *BRAIN DAMAGE* or *DEATH*.**
- **Teak surfing, dragging, or water skiing within 20 feet of a moving watercraft can be fatal.**

CO Facts

- CO poisoning causes a significant number of boating deaths each year.
- Called the "silent killer", CO is an extremely toxic, colorless, odorless and tasteless gas.
- CO can harm or even kill you inside or outside your yacht.
- CO can affect you whether you're underway, moored, or anchored.
- CO symptoms are similar to seasickness or alcohol intoxication.
- CO can make you sick in seconds. In high enough concentrations, even a few breaths can be fatal.
- Breathing CO blocks the ability of your blood to carry oxygen.
- The effects are cumulative. Even low levels of exposure can result in injury or death.

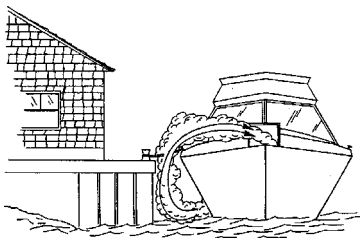
Factors that Increase the Effects of CO Poisoning

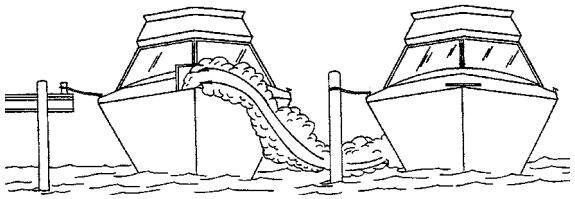
- Age
- Smokers or people exposed to high concentrations of cigarette smoke
- Consumption of alcohol
- Lung disorders
- Heart problems
- Pregnancy

Where & How CO Can Accumulate

Stationary conditions that increase CO accumulations include:

A. Using engine, generator, or other fuel burning device when yacht is moored in a confined space.



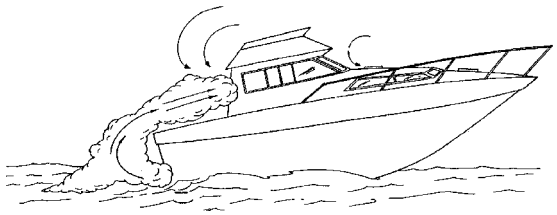


B. Mooring too close to another boat that is using its engine, generator, or other fuel burning device.

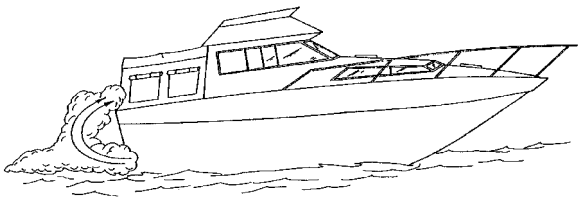
To correct stationary situations A and/or B:

- ***Close all*** windows, portlights and hatches.
- If possible, move your yacht away from source of CO.

Running conditions that increase CO accumulations include:



C. Running yacht with trim angle of bow too high.



D. Running yacht without through ventilation (station wagon effect).

To correct running situations C and/or D:

- Trim bow down.
- ***Open*** windows and canvas.
- When possible, run yacht so that prevailing winds help dissipate exhaust.

How To Protect Yourself & Others From CO

- Know where and how CO may accumulate in and around your yacht (see above).
- ***Always*** maintain fresh air circulation throughout your yacht.
- Know where your engine and generator exhaust outlets are located and keep everyone away from these areas.
- ***Never*** sit on, or hang onto, the back deck or swim platform while the engines or generator are running.
- ***Never*** enter the areas under swim platforms where exhaust outlets are located.
- Although CO can be present without the smell of exhaust fumes, if exhaust fumes are detected on your yacht, take ***immediate*** action to dissipate these fumes.
- Treat symptoms of seasickness as possible CO poisoning. Get the person into fresh air ***immediately***. Seek medical attention—unless you're sure it's not CO.
- Maintain the CO monitors inside your yacht. ***NEVER*** ignore any alarm. Replace monitors as recommended by the monitor manufacturer.
- Follow the checklists provided on the next page.
- Get a Vessel Safety Check.

For information about free VESSEL SAFETY CHECKS, visit www.vesselsafetycheck.org or contact your local U.S. Coast Guard Auxiliary or United States Power Squadrons®.

- U.S. Coast Guard Auxiliary: 1-800-368-5647 or on the Internet at: http://www.cgaux.org
- U.S. Power Squadrons: 1-888-FOR-USPS (1-888-367-8777) or on the Internet at: http://www.usps.org

CO Checklists

Trip Checklist

- ❏ Educate ***all*** passengers about the symptoms of CO poisoning and where CO may accumulate.
- ❏ When docked, or rafted with another boat, be aware of exhaust emissions from the other boats.
- ❏ Make sure you know where the exhaust outlets are located on your yacht.
- ❏ Confirm that water flows from the exhaust outlets when the engines and generator are started.
- ❏ Listen for any change in exhaust sound, which could mean an exhaust component failure.
- ❏ Test the operation of each CO monitor by pressing the test button.

Monthly Checklist

- ❏ Make sure ***all*** exhaust clamps are in place and secure.
- ❏ Look for exhaust leaking from exhaust system components. Signs include rust and/or black streaking, water leaks, or corroded or cracked fittings.
- ❏ Inspect rubber exhaust hoses for burned, cracked, or deteriorated sections. ***All*** rubber hoses should be pliable and free of kinks.

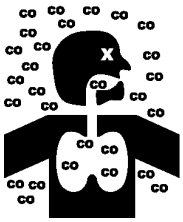
Annual Checklist

Have a Trained Marine Technician:

- ❏ Replace exhaust hoses if cracking, charring, or deterioration is found.
- ❏ Ensure that your engines and generators are properly tuned, and well maintained.
- ❏ Inspect each water pump impeller and the water pump housing. Replace if worn. Make sure cooling systems are in working condition.
- ❏ Inspect ***all*** metallic exhaust components for cracking, rusting, leaking, or loosening. Make sure they check the cylinder head gasket, exhaust manifold, water injection elbow, and the threaded adapter nipple between the manifold and the elbow.
- ❏ Clean, inspect, and confirm proper operation of the generator cooling water anti-siphon valve (if equipped).

CO Monitors

⚠ DANGER!



CARBON MONOXIDE POISONING HAZARD!

- **The house battery switch *MUST* be in the *On* position for the CO monitors to work.**
- **If your yacht will be unattended for an extended period of time, turn *Off* the house battery switch or the CO monitors *WILL* drain the house battery.**
- ***IMMEDIATELY* turn the house battery switch back *On* when you reboard your yacht.**

- ***NEVER*** disconnect the CO monitors.
- Read the manufacturer's instructions for your CO monitors. **If you did not get the manufacturer's instructions, call (800) 383-0269 and they will be mailed to you.**

More Information

For more information about preventing carbon monoxide poisoning on recreational boats and other boating safety tips, contact:

United States Coast Guard
Office of Boating Safety (G-OPB-3)
2100 Second Street SW
Washington, DC 20593
www.uscgboating.org
1-800-368-5647

National Marine Manufacturers Association (NMMA)
200 East Randolph Drive
Suite 5100
Chicago, IL 60601-9301
www.nmma.org
312-946-6200

American Boat & Yacht Council, Inc. (ABYC)
613 Third Street
Suite 10
Annapolis, MD 21403
www.abycinc.org
410-990-4460

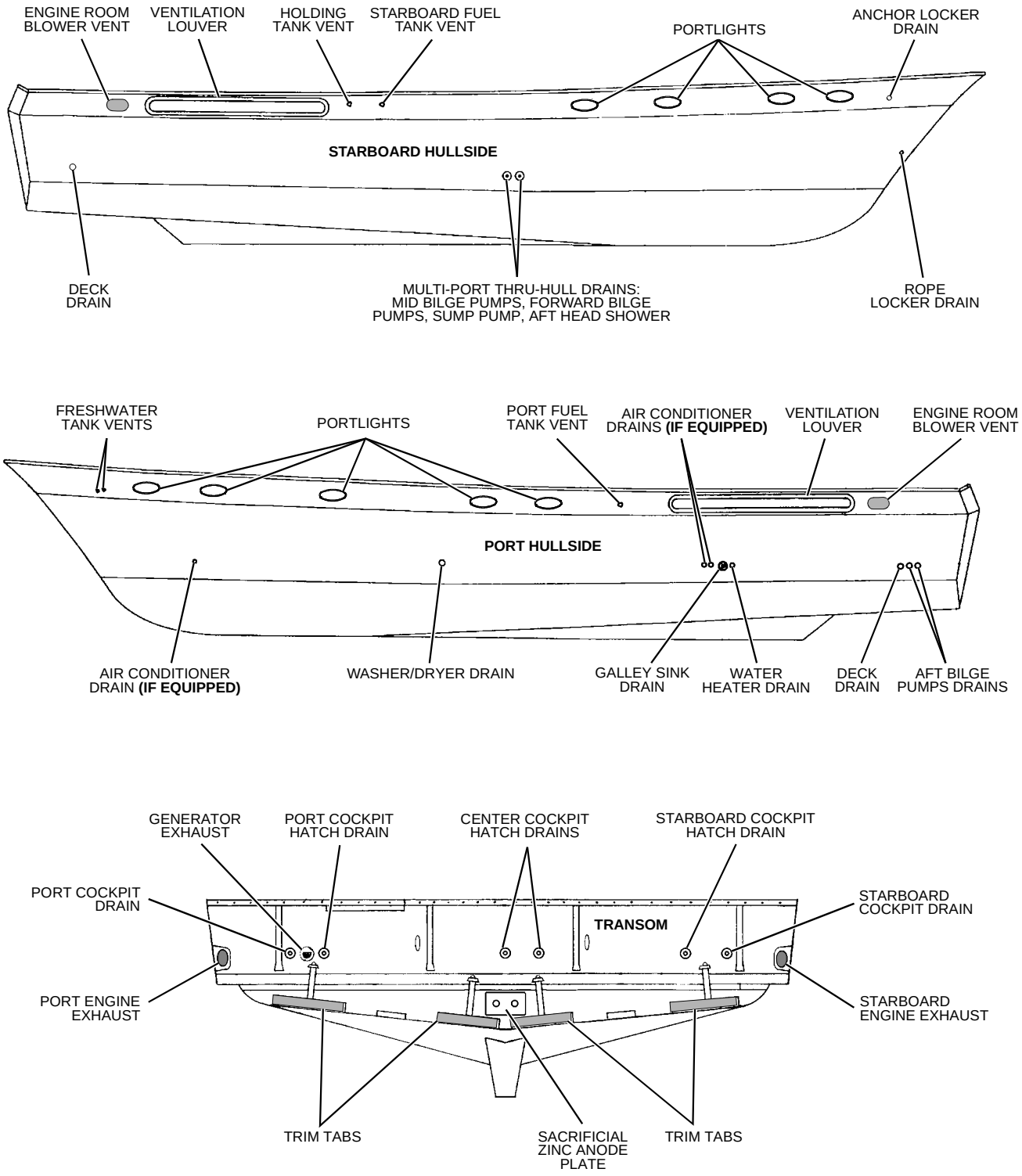
For information about free VESSEL SAFETY CHECKS, visit www.vesselsafetycheck.org or contact your local U.S. Coast Guard Auxiliary or United States Power Squadrons®.

- U.S. Coast Guard Auxiliary: 1-800-368-5647 or on the Internet at: http://www.cgaux.org
- U.S. Power Squadrons: 1-888-FOR-USPS (1-888-367-8777) or on the Internet at: http://www.usps.org

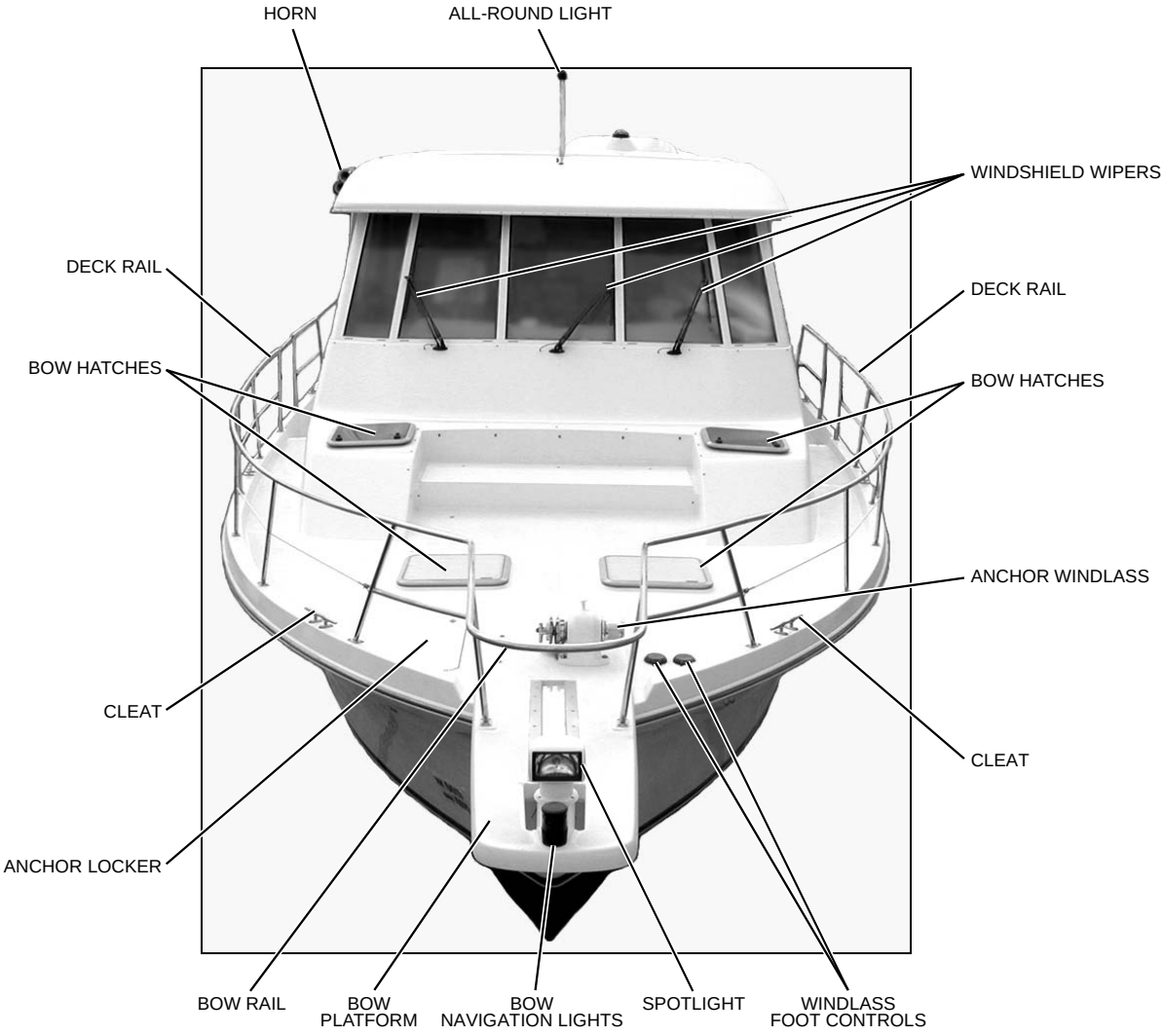
Chapter 2: Locations

Exterior Views

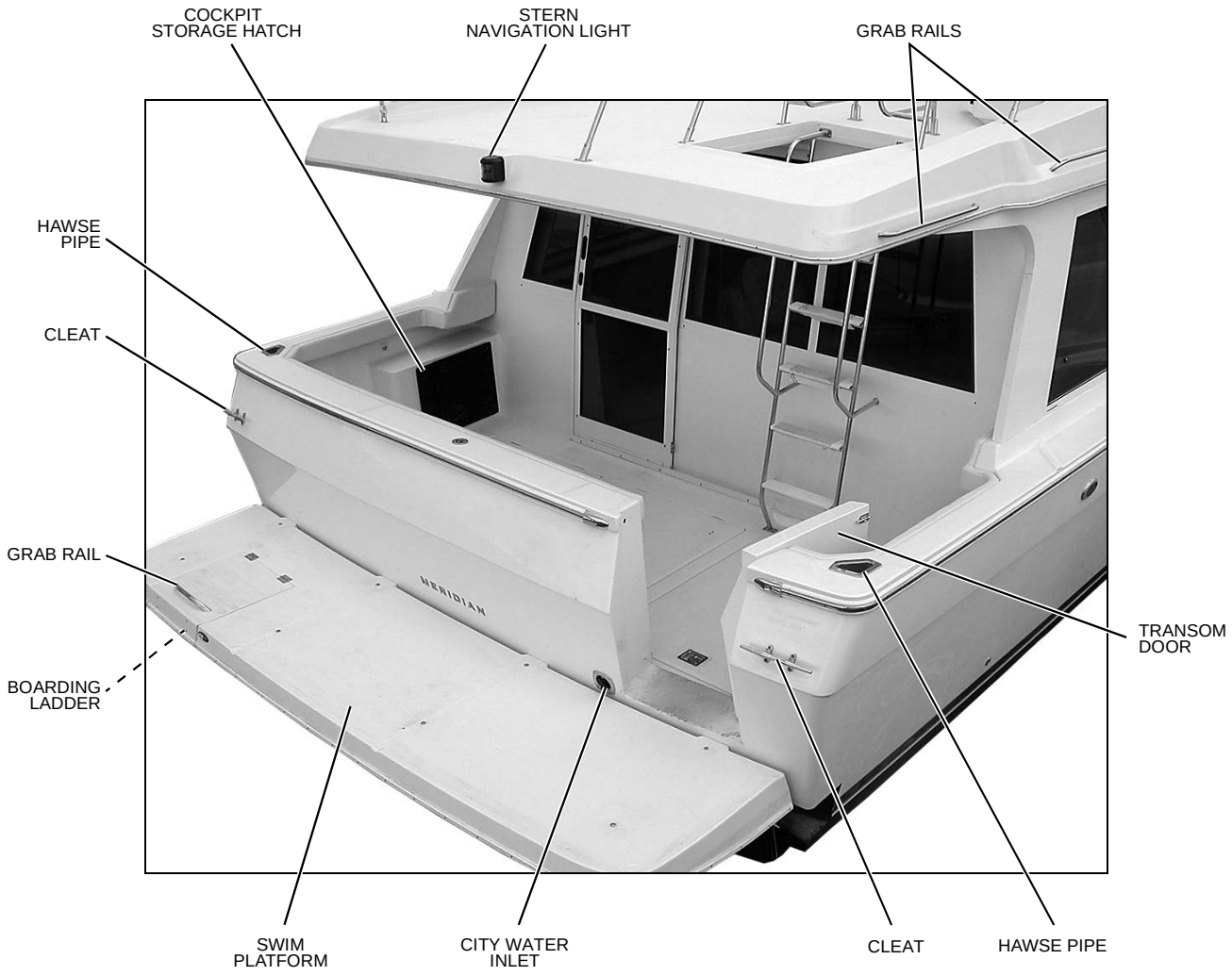
Hull Views



Forward Deck View



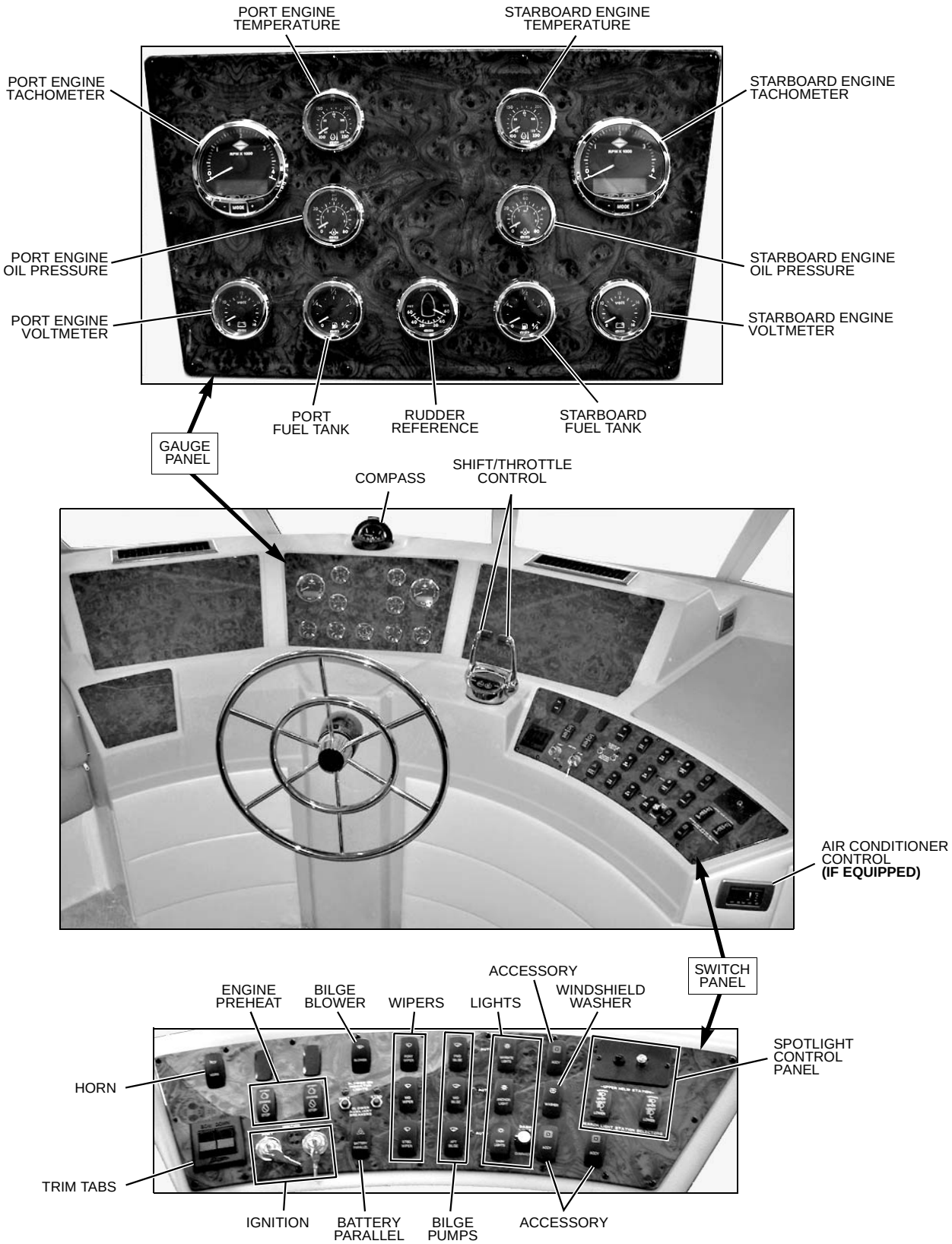
Aft Deck View



Helm Views

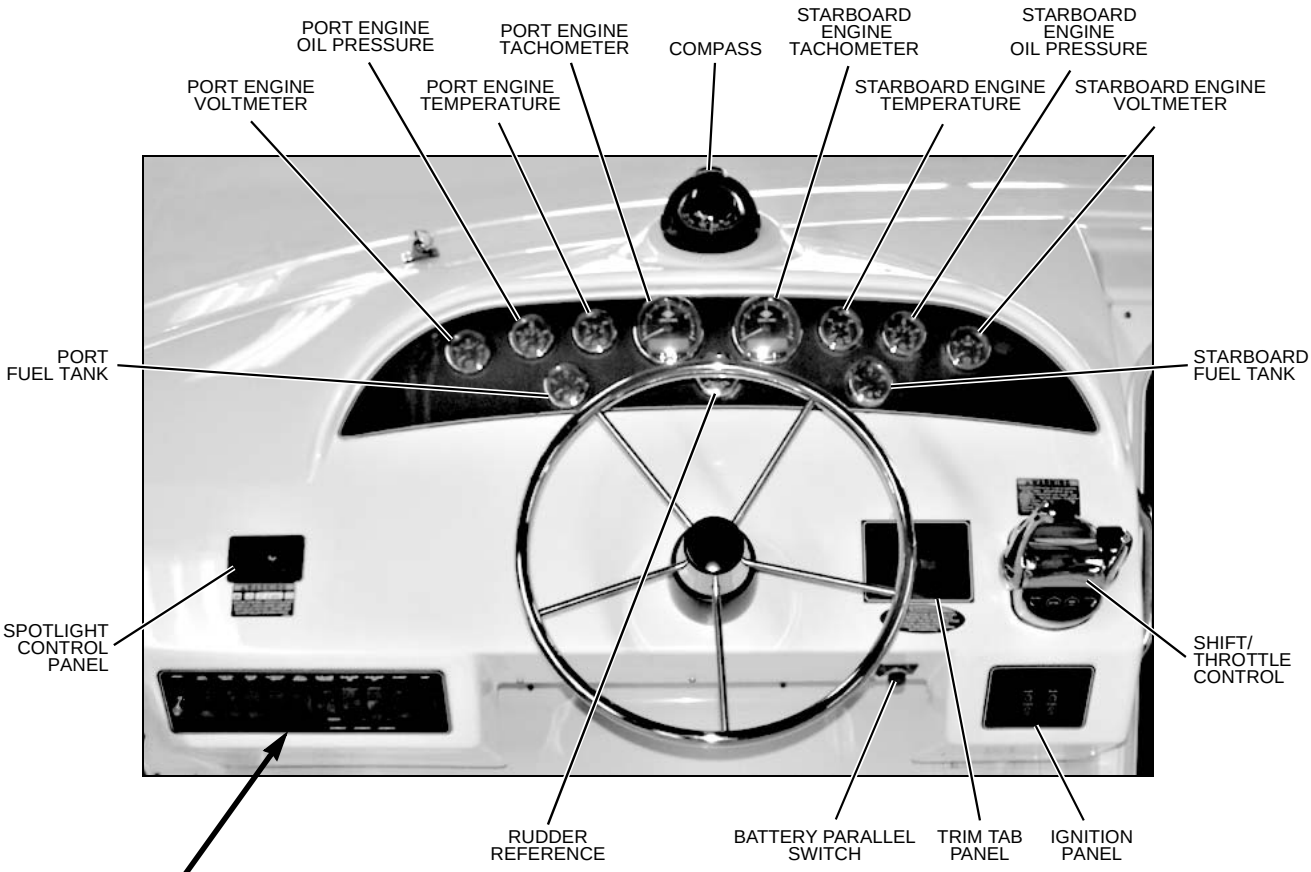
Pilothouse Helm Station

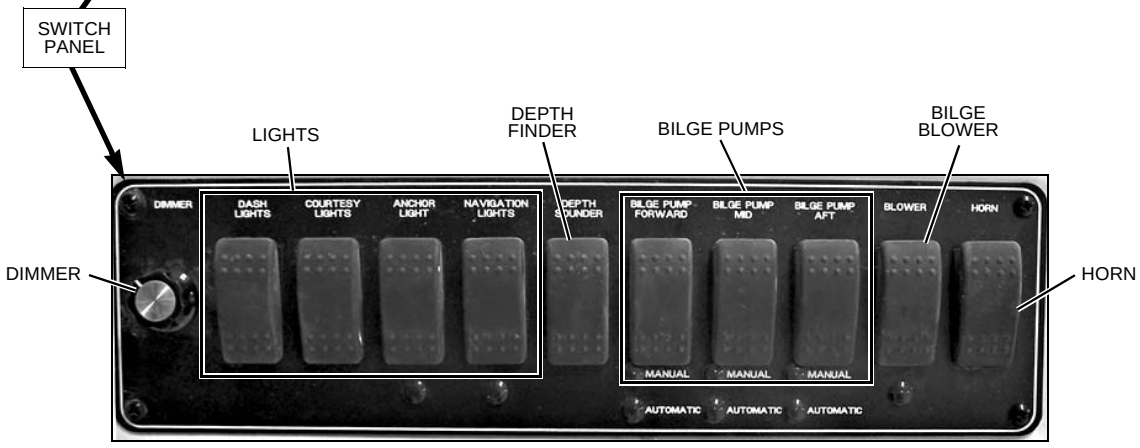
NOTE: TYPICAL HELM LAYOUTS SHOWN. ACTUAL LAYOUTS MAY VARY DEPENDING ON ENGINE AND ACCESSORY OPTIONS.



Command Bridge Helm Station

NOTE: TYPICAL HELM LAYOUTS SHOWN. ACTUAL LAYOUTS MAY VARY DEPENDING ON ENGINE AND ACCESSORY OPTIONS.



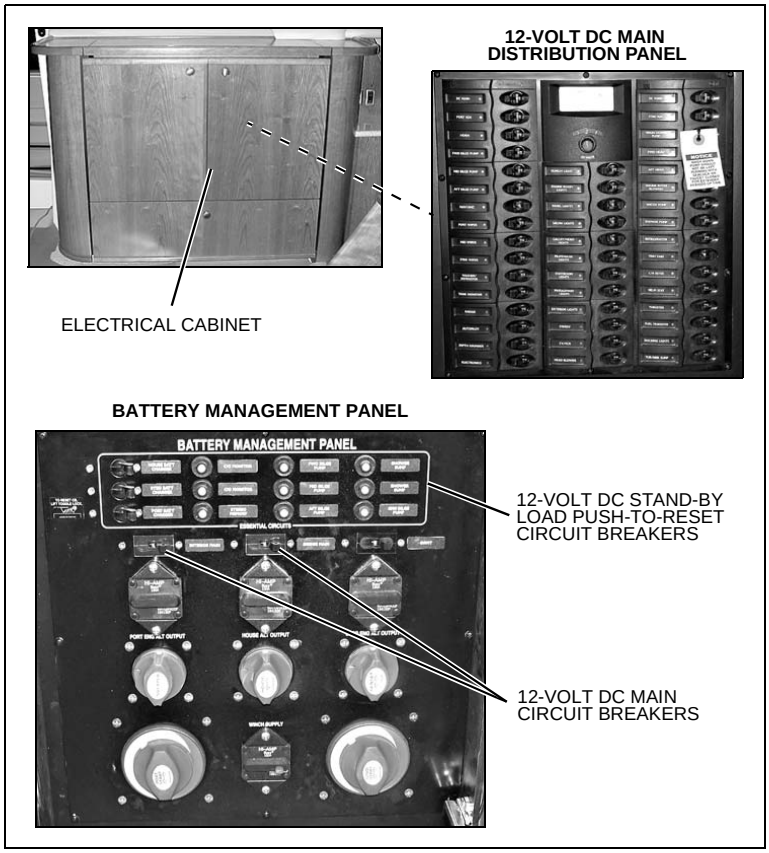


Component Locations

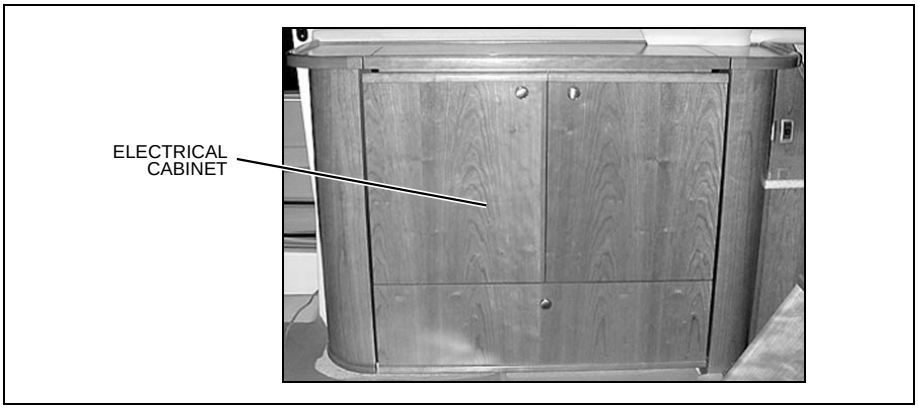
12-Volt DC Accessory Outlet: Located on the port side of the pilothouse helm dash.

12-Volt DC Circuit Breakers:

- The 12-volt DC main distribution panel is located in the electrical cabinet on the starboard side of the pilothouse.
- The 12-volt DC main circuit breakers and standby-load push-to-reset circuit breakers are located on the battery management panel.

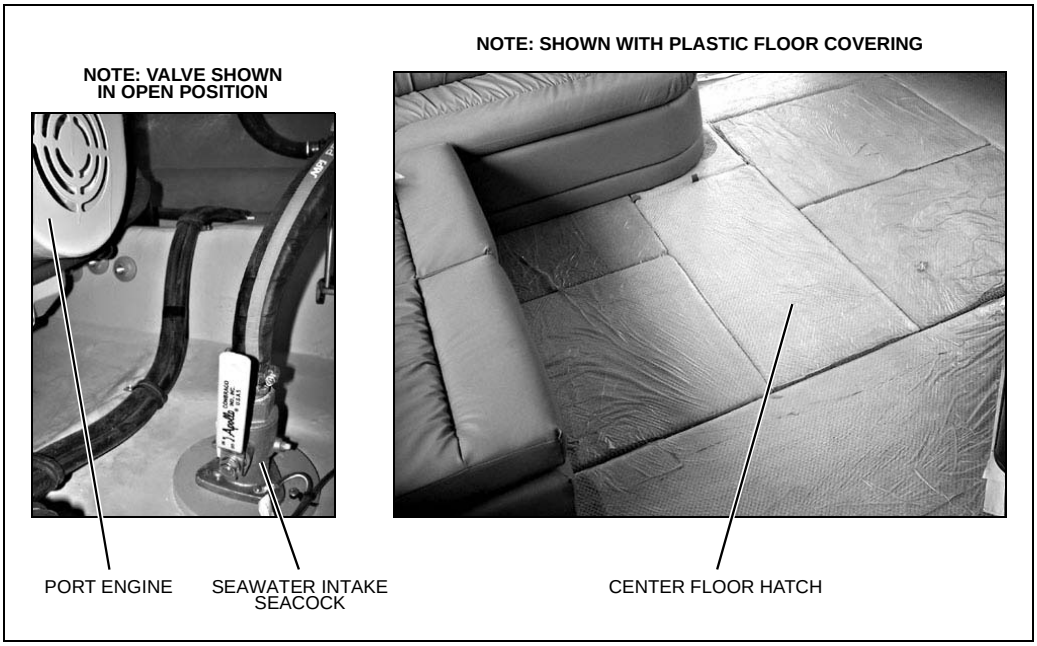


110-Volt AC & 12-Volt DC Master Panels: Located inside the electrical cabinet on the starboard side of the pilothouse.



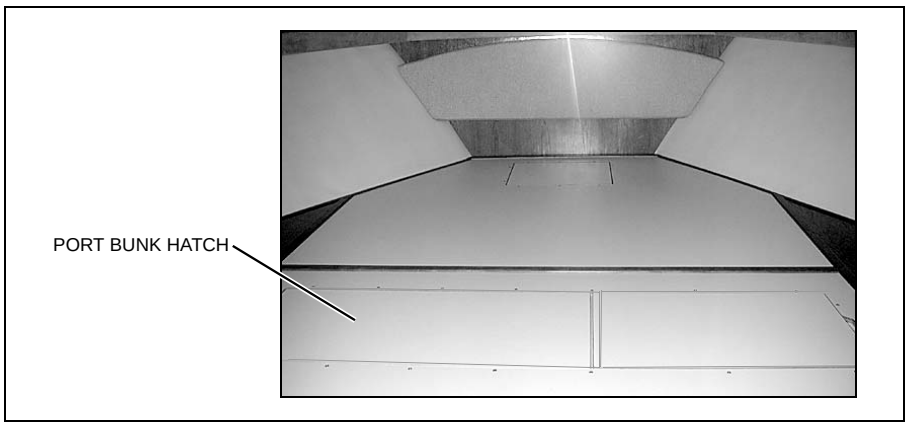
Air Conditioner Sea water Intake Seacock (If Equipped):

- Located in the engine room, forward of the port engine.
- Access through the salon center floor hatch.

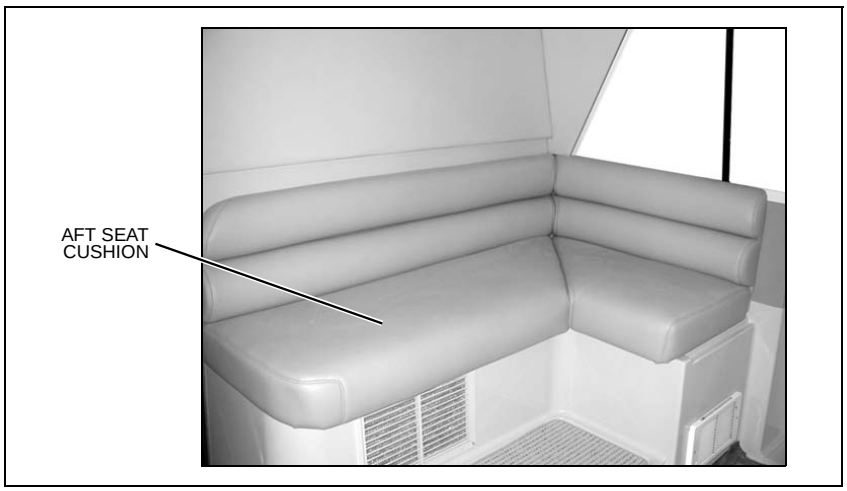

NOTE: VALVE SHOWN IN OPEN POSITION
NOTE: SHOWN WITH PLASTIC FLOOR COVERING
PORT ENGINE
SEAWATER INTAKE SEACOCK
CENTER FLOOR HATCH

Air Conditioners (3 total) (If Equipped):

- One is located inside the port bunk hatch in the forward stateroom.

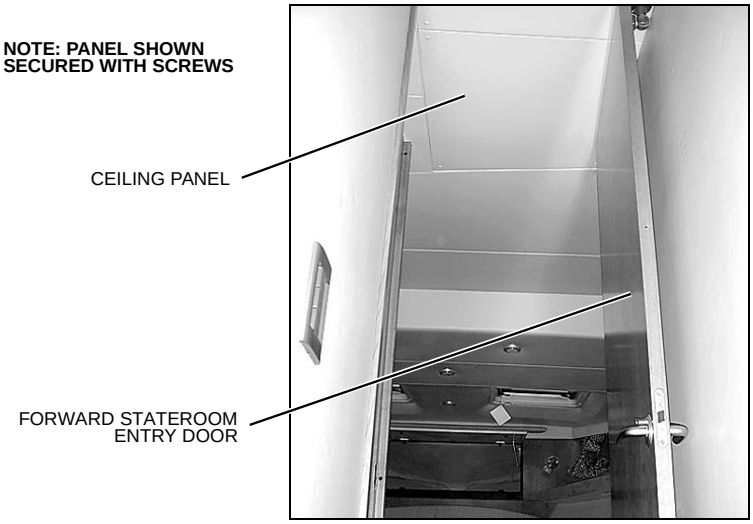


- One is located under the pilothouse lounge's aft seat cushion.



- One is located under the pilothouse dash.
- Access through the ceiling panel in the forward stateroom doorway.

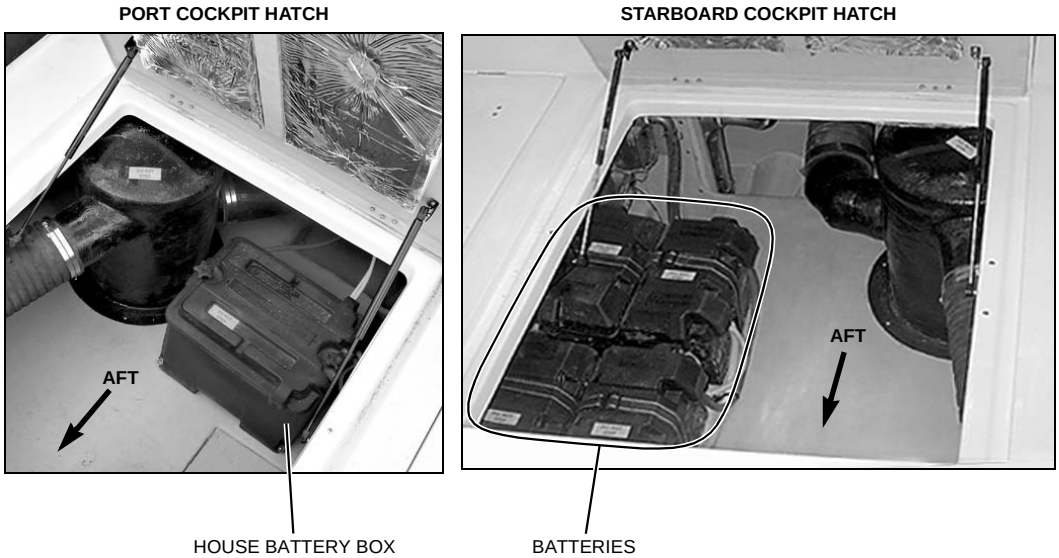
NOTE: Panel will either be secured with velcro or screws. If four screw caps are visible, remove them and then use a phillips screwdriver to remove the screws.



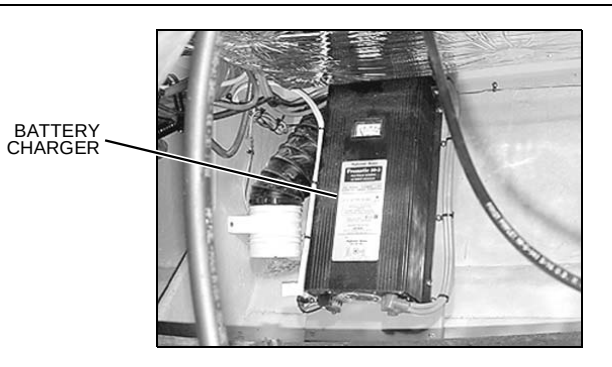
Batteries (6 Total):

- All batteries except the house batteries are located on the starboard side of the lazarette.
- The house batteries are located on the port side of the lazarette.

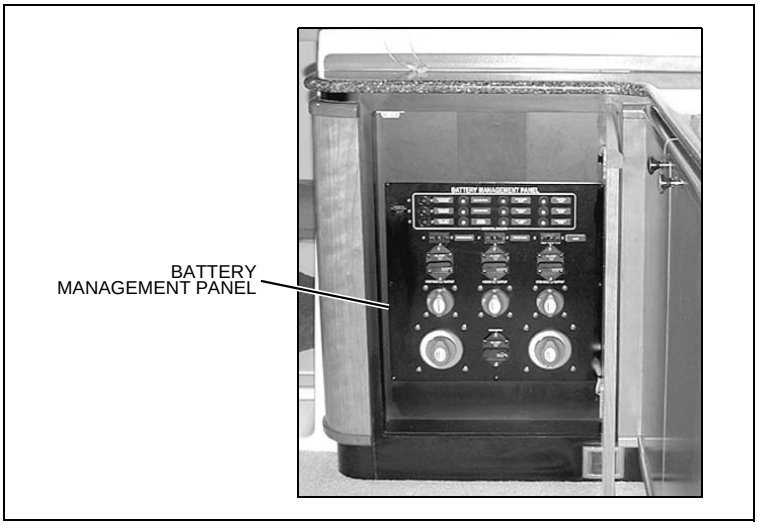
NOTE: There are two batteries inside the house battery box.



Battery Charger: Located in the port aft corner of the engine room.

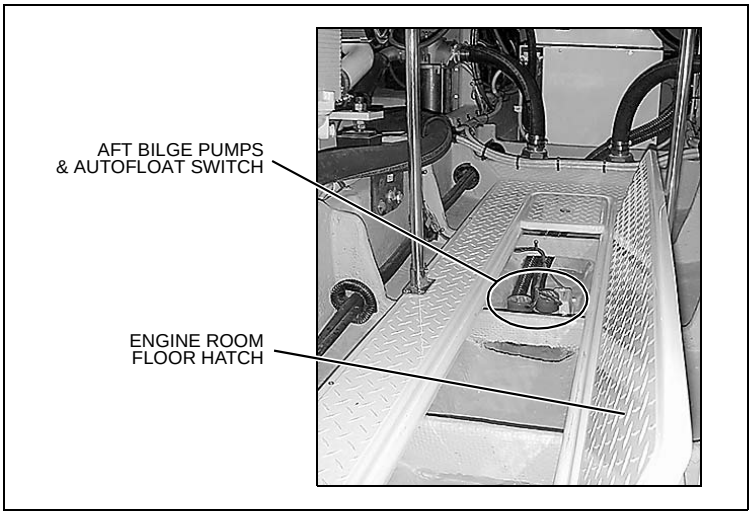


Battery Management Panel (Battery Switches): Located inside the cabinet in the port aft corner of the salon.

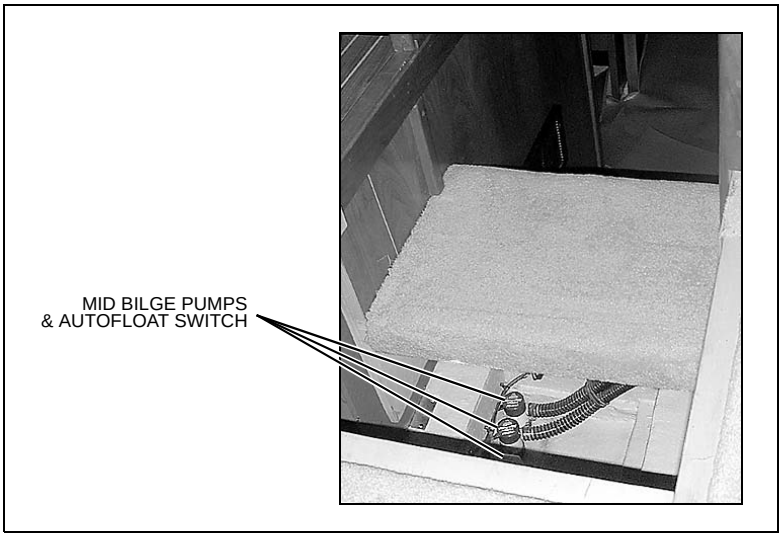


Bilge Pumps (6 total):

- Two are located in the bilge under the engine room floor hatch.

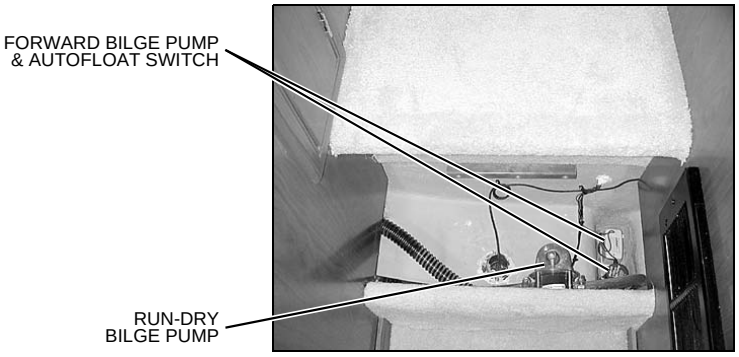


- Two are located in the utility room bilge.
- Access the utility room bilge by lifting the top step of the salon stairs.

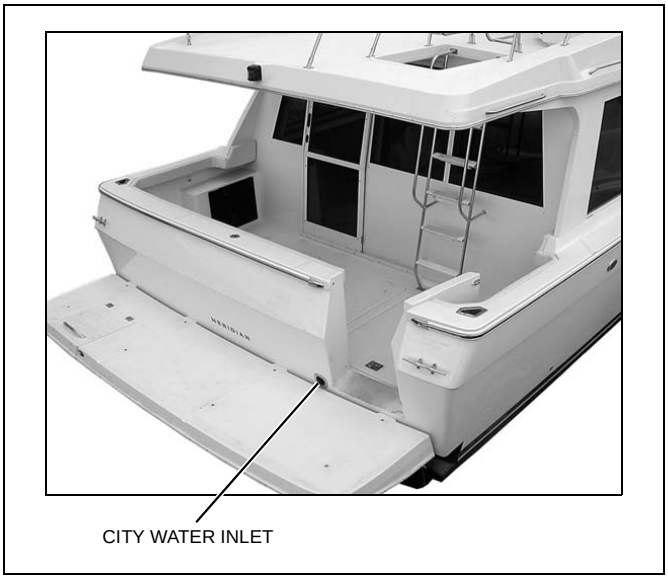


- Two are located under the bottom step of the salon stairs.
- Access by lifting off the top of the step.

NOTE: The run-dry pump is not controlled by a float switch. It is controlled by the forward bilge pump switch at the helm.

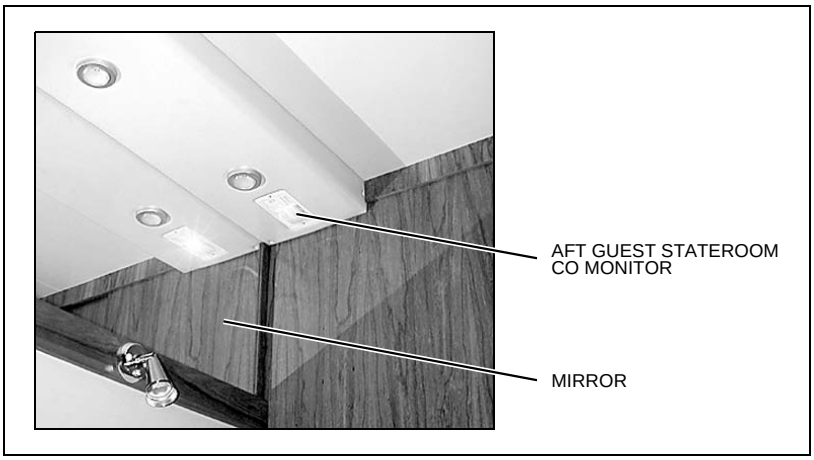


City Water Inlet: Located on the transom above the swim step platform.



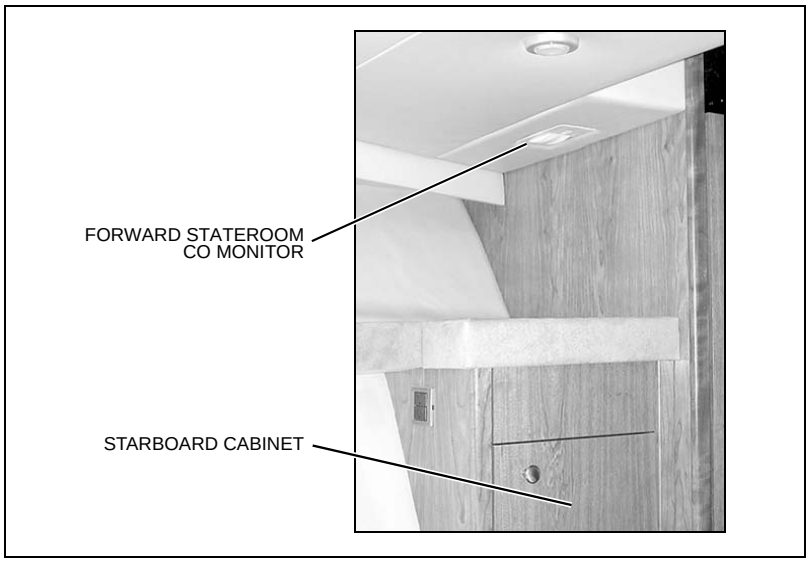
CO Monitors (4 total):

- One is located on the forward ceiling in the aft guest stateroom.

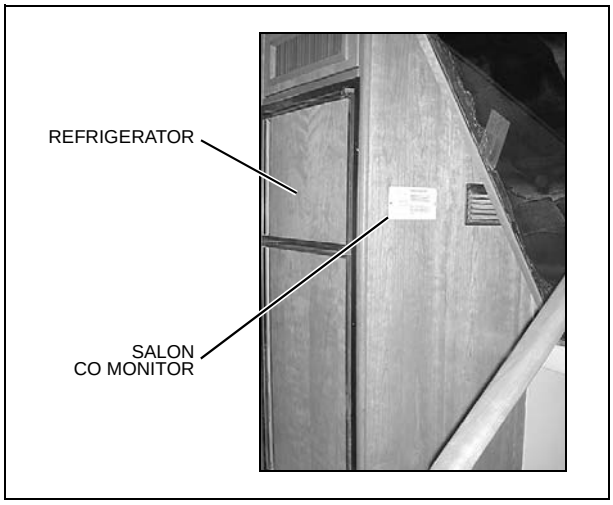


- One is located on the port side of the hanging locker in the mid guest stateroom.

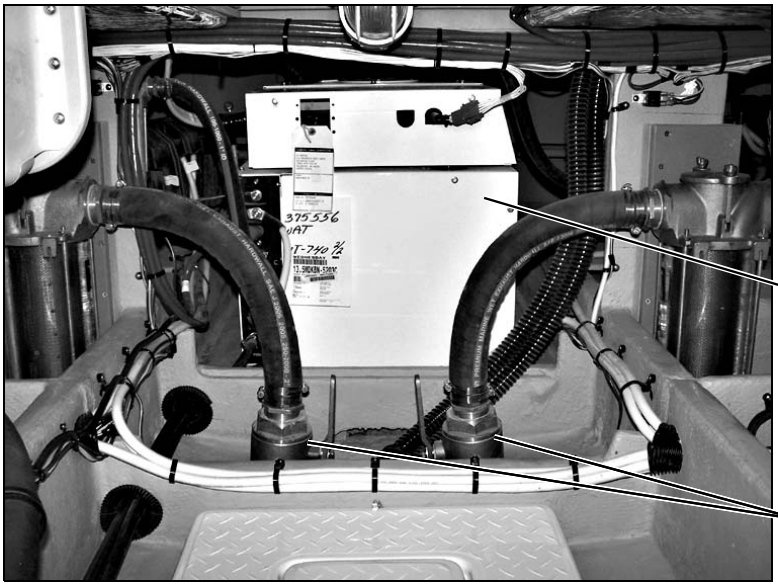
- One is located in the forward stateroom, on the aft ceiling above the starboard cabinet.



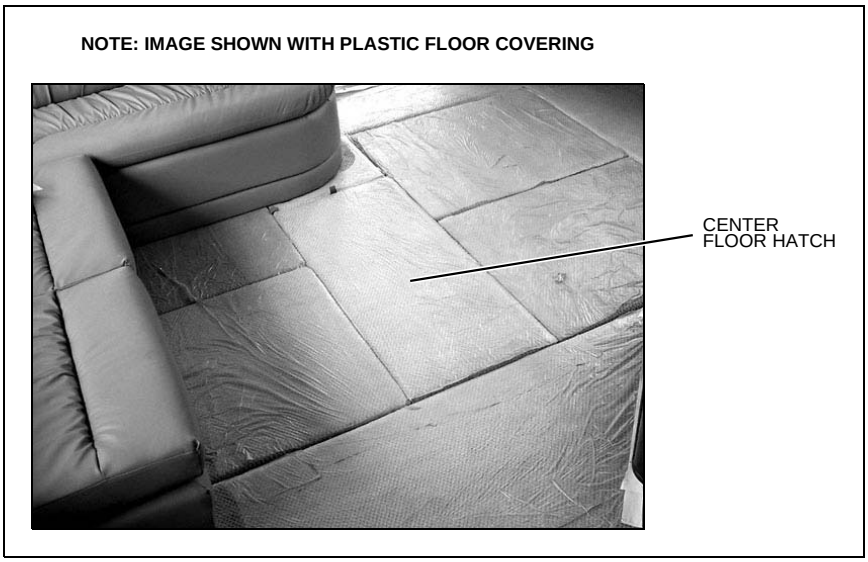
- One is located on the port wall above the salon stairs.



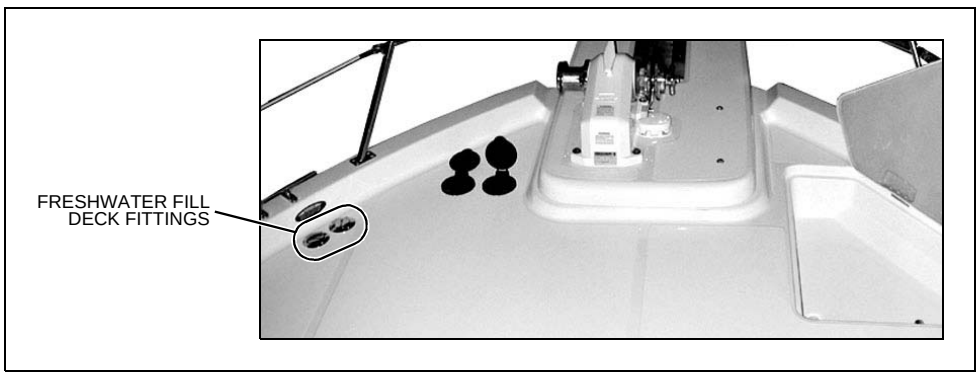
Engine Cooling System Seawater Intake Seacocks: Located at the aft end of the engine room bilge.



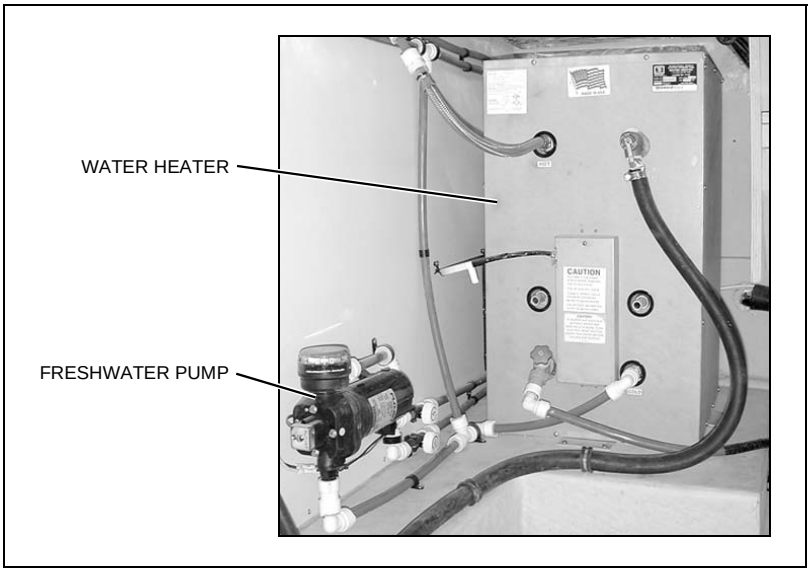
Engine Room: Access through the center floor hatch in the salon.



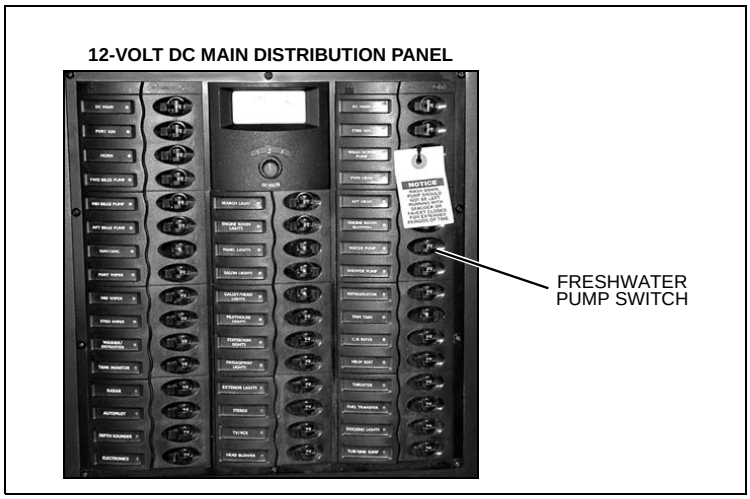
Freshwater Fill Deck Fittings (2 Total): Located on the port side of the forward deck.



Freshwater Pump: Located on the port side of the utility room, aft of the water heater.

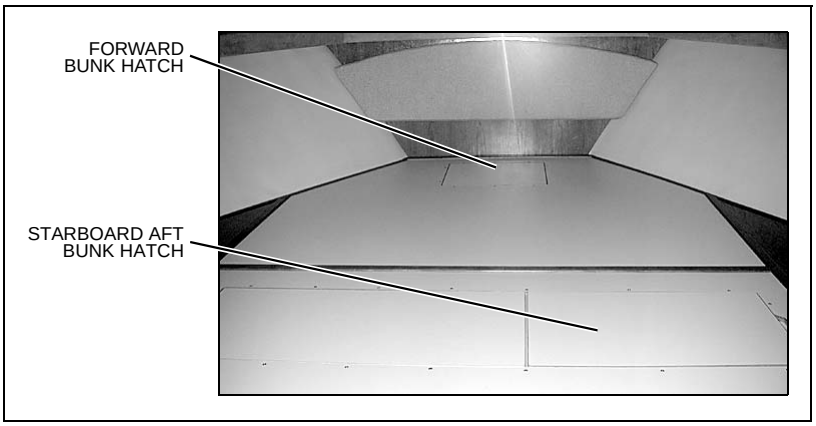


Freshwater Pump Switch: Located on the 12-volt DC main distribution panel.

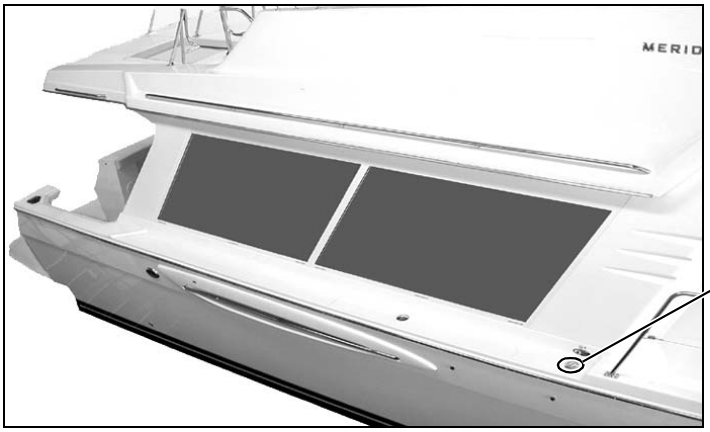


Freshwater Tanks (2 Total):

- Both are located under the forward state-room bunk.
- Access the forward tank through the forward bunk hatch.
- Access the aft tank through the hatch inside the starboard aft bunk hatch.

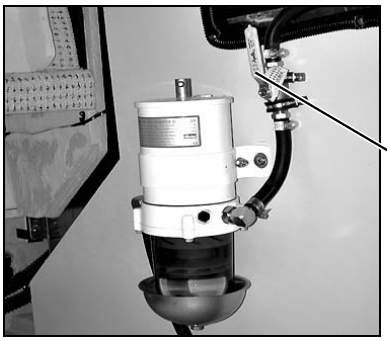


Fuel Fill Deck Fittings:
Located on the port and starboard deck trails.

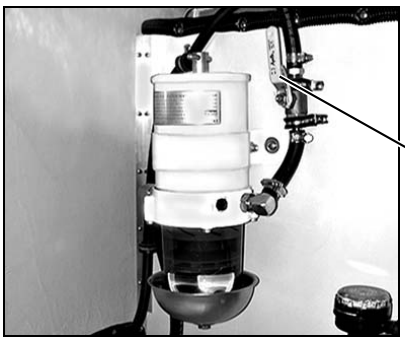


Fuel Shut-Off Valves (3 Total):

- Starboard Engine: Located in the starboard forward corner of the utility room.

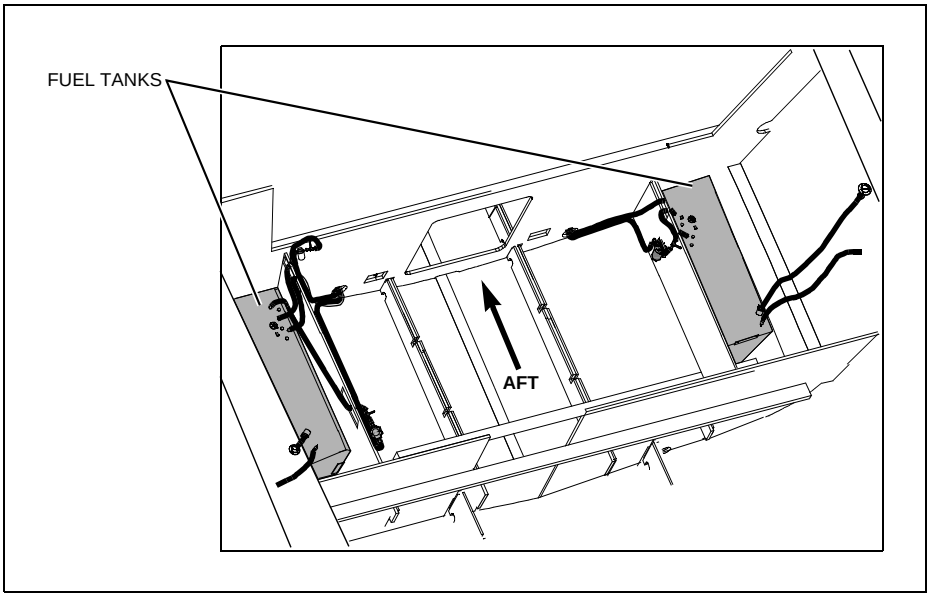


- Port Engine: Located in the port aft corner of the utility room.



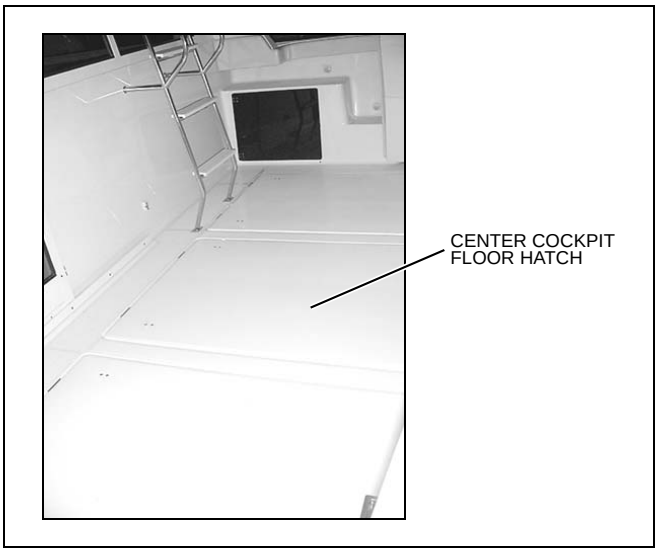
- Generator: Located in the starboard aft corner of the utility room.

Fuel Tanks: Located on the port and starboard sides of the utility room.

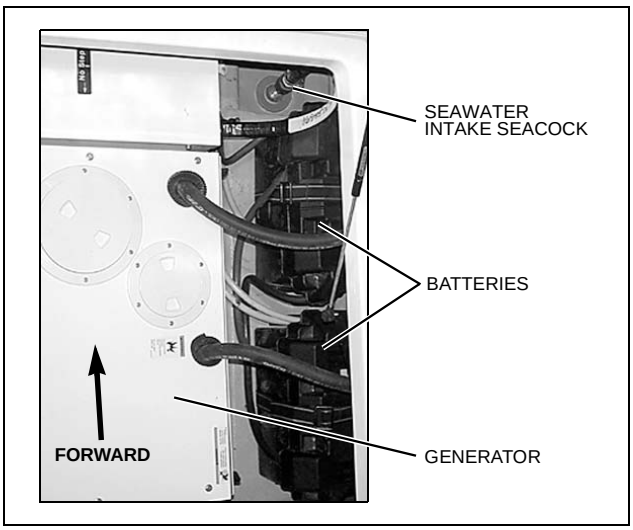


Generator:

- Located in the lazarette.
- Access through the center cockpit floor hatch.

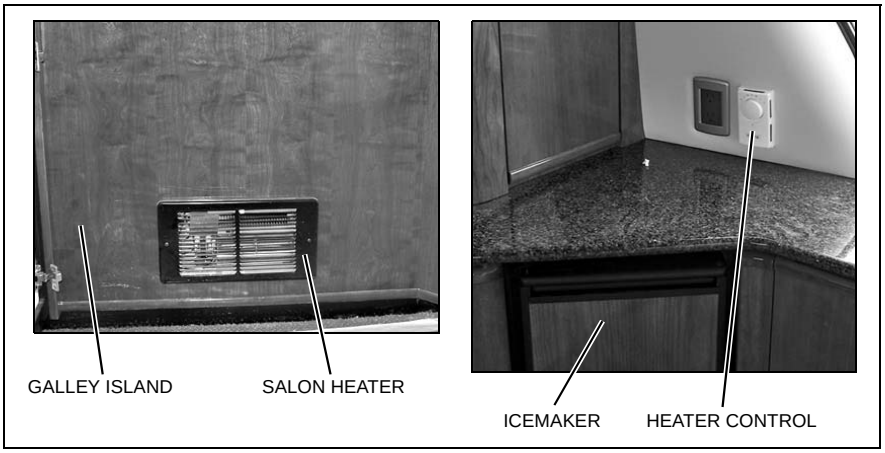


Generator Seawater Intake Seacock: Located on the starboard side of the lazarette, forward of the batteries.

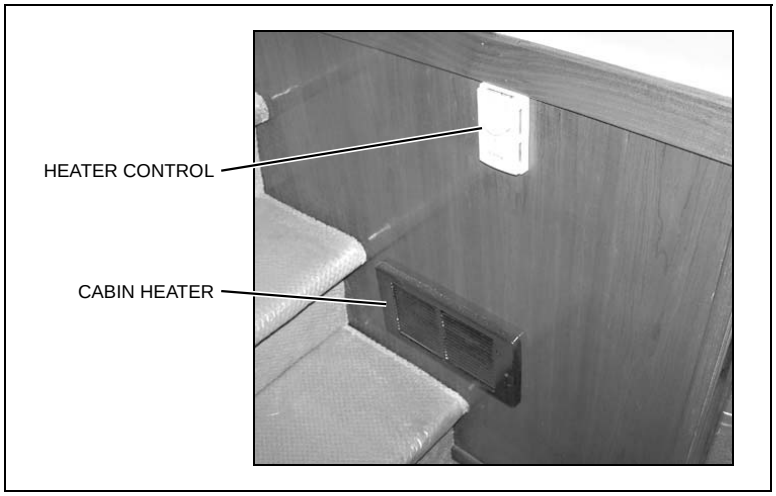


Heaters (Electric) (4 Total):

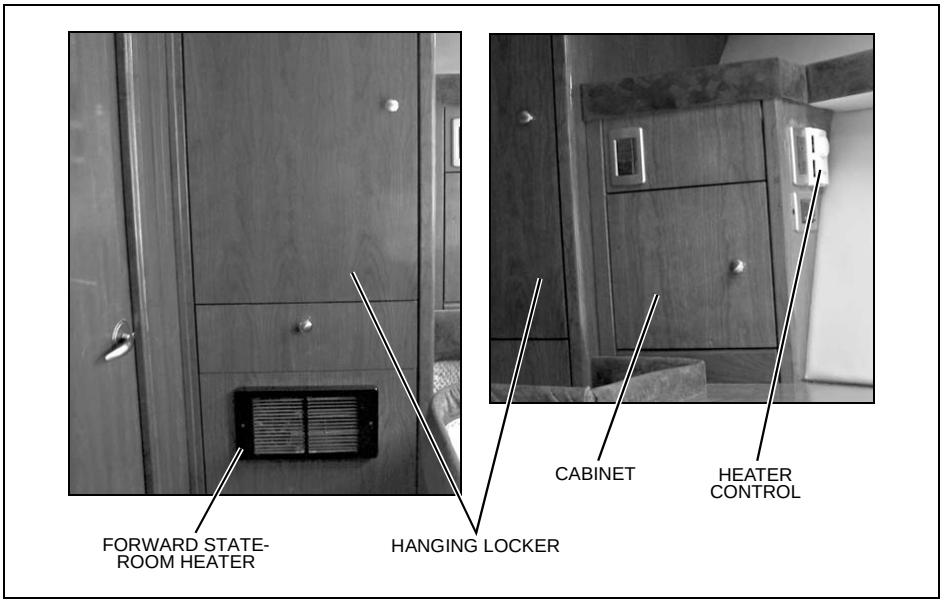
- One is located on the aft side of the galley island in the salon.
- The control is located on the starboard side of the salon, above the icemaker.



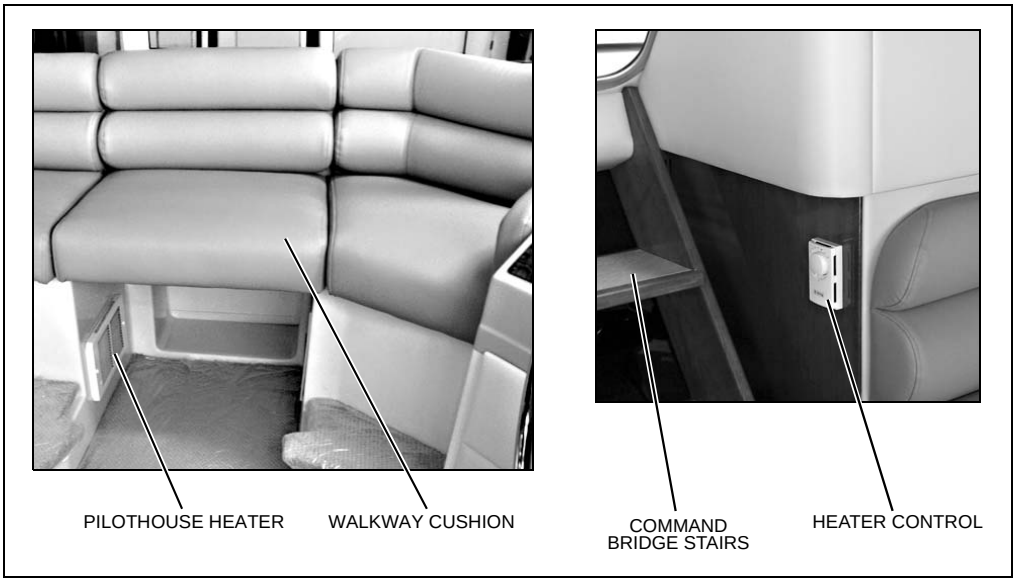
- One is located above the bottom salon step on the port side of the hallway.



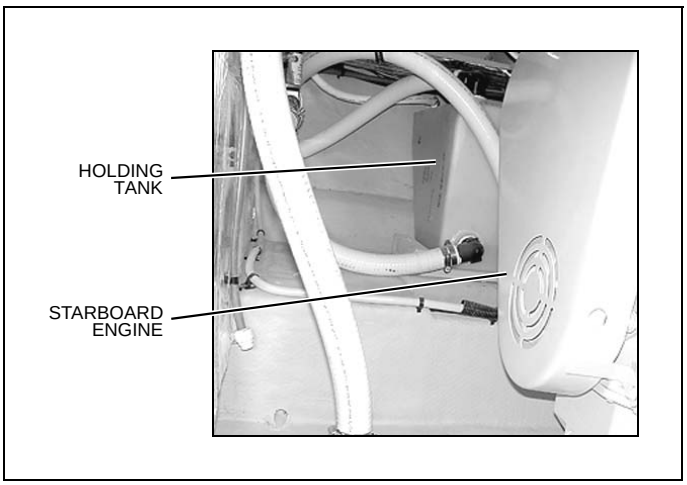
- One is located below the hanging locker on the port side of the forward stateroom.
- The control is located on the forward side of the cabinet forward of the port hanging locker.



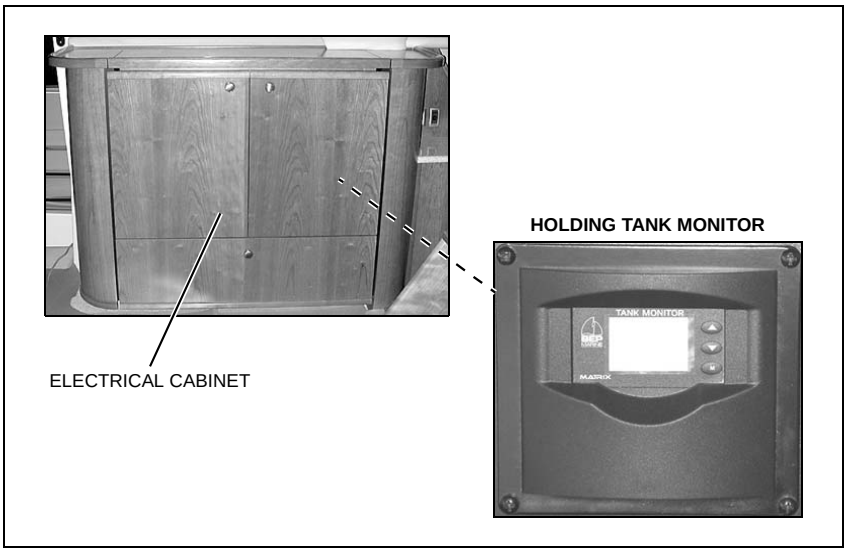
- One is located under the lounge seat walkway cushion on the port side of the pilothouse.
- The control is located next to the command bridge stairs on the port wall.



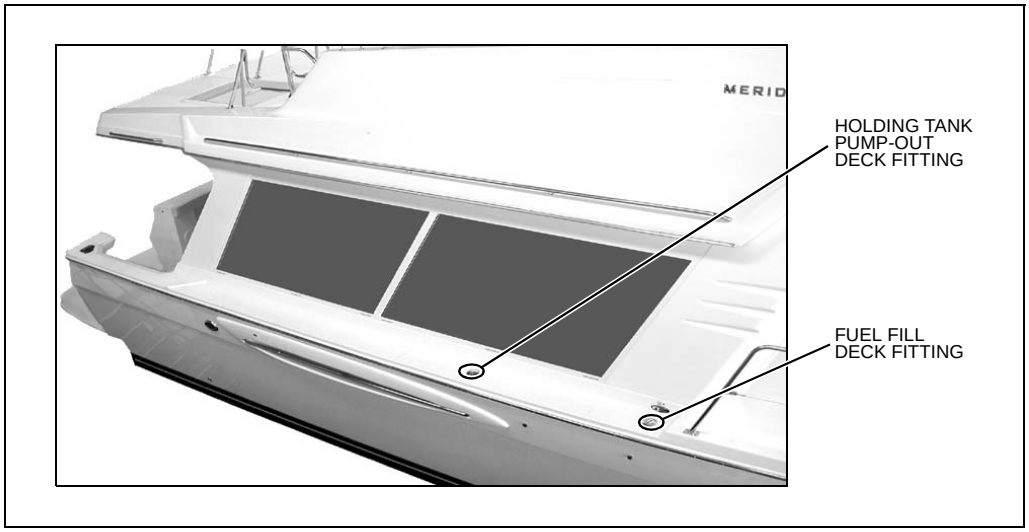
Holding Tank: Located on the starboard side of the engine room.



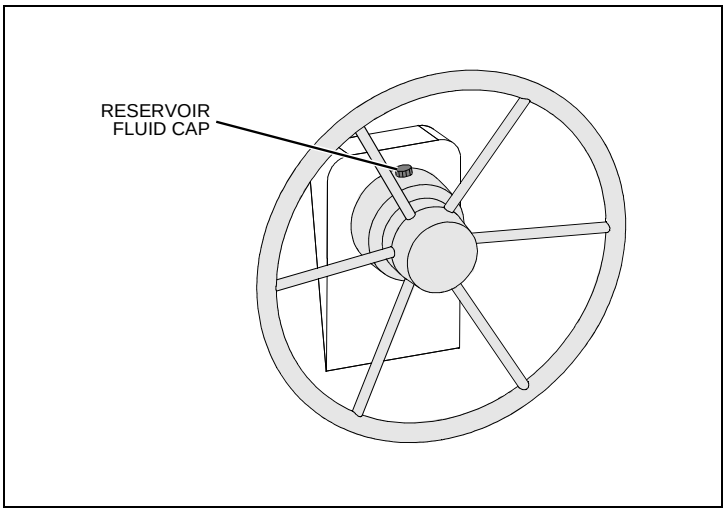
Holding Tank Monitor: Located inside the electrical cabinet on the starboard side of the pilothouse.



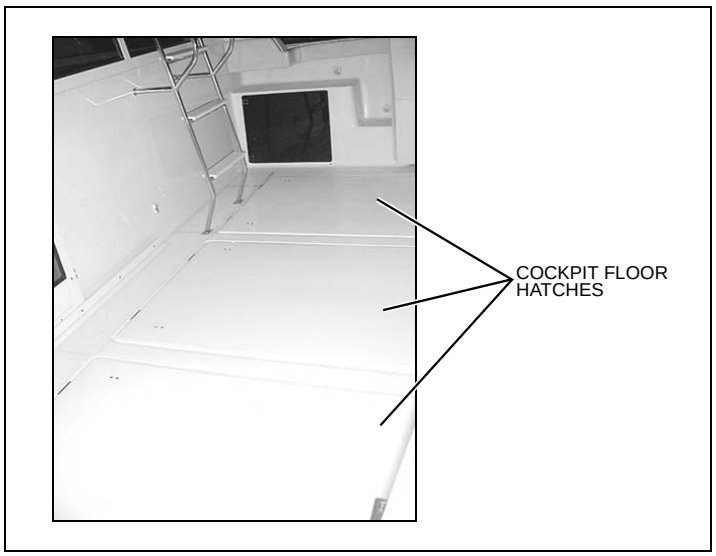
Holding Tank Pump-out Deck Fitting (marked WASTE): Located aft of the fuel fill deck fitting on the starboard deck trail.



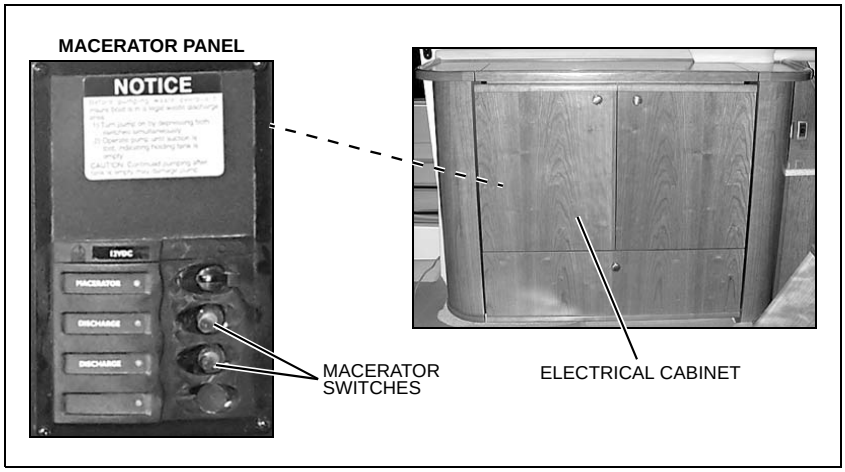
Hydraulic Steering Fluid Reservoir: Located on the steering wheel column at each helm.



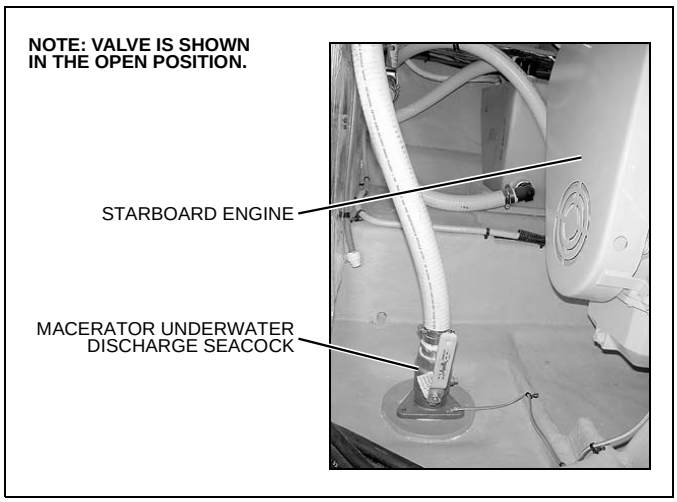
Lazarette: Access through the cockpit floor hatches.



Macerator Switches: Located on the macerator panel inside the electrical cabinet on the starboard side of the pilothouse.

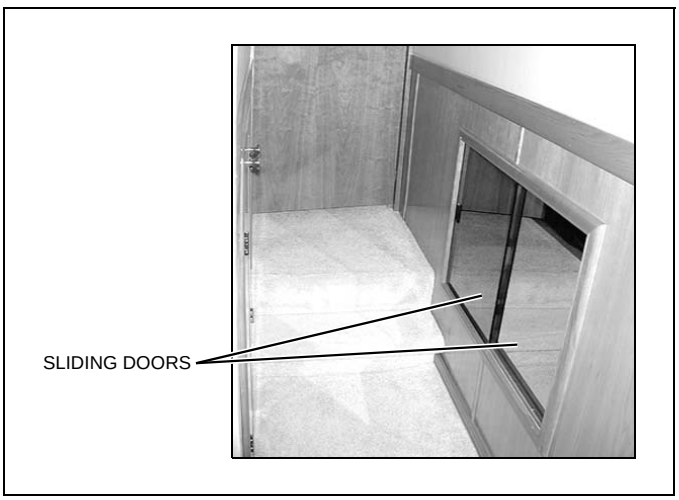


Macerator Underwater Discharge Seacock: Located forward of the starboard engine in the engine room.

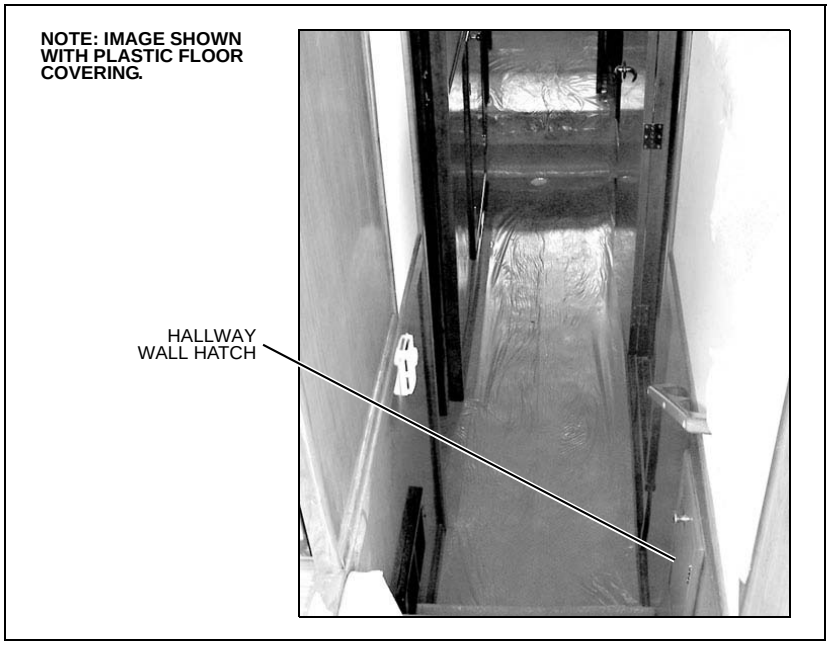


Marine Head (Vacuum Flush) Vacuum Pumps (2 Total):

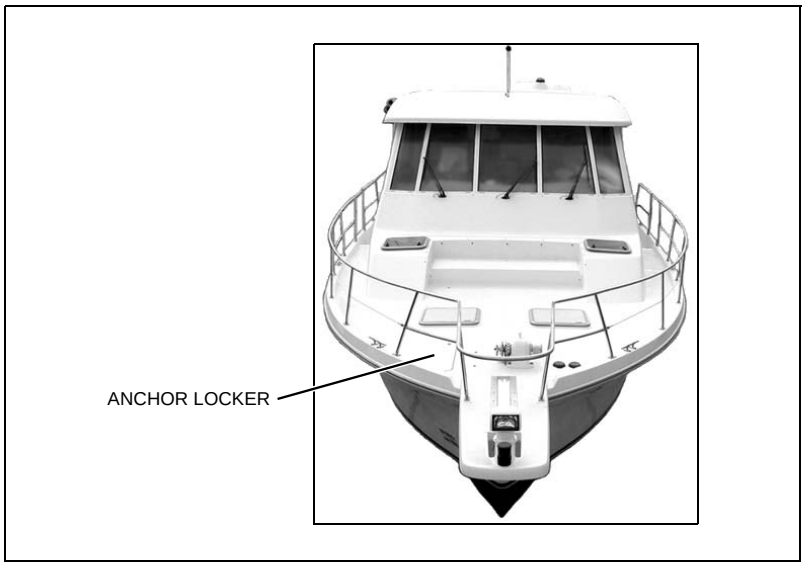
- One is accessed through the sliding doors on the starboard side of the hallway.



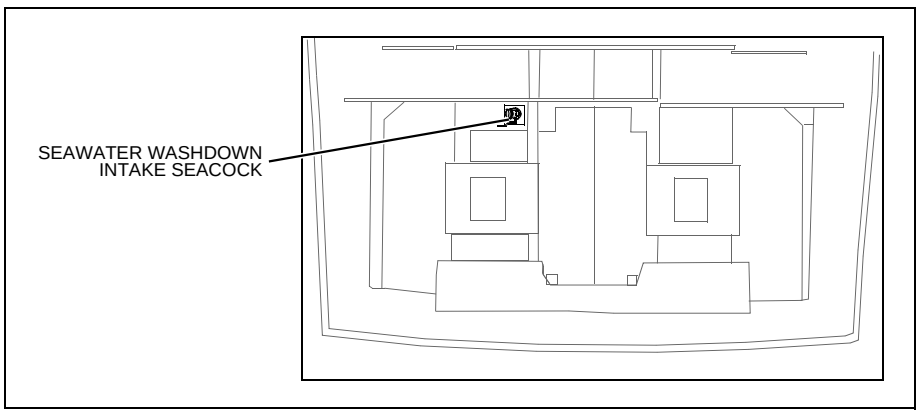
- One is accessed through the wall hatch on the starboard aft side of the hallway.



Seawater Washdown Faucet: Located inside the anchor locker on the starboard side of the forward deck.

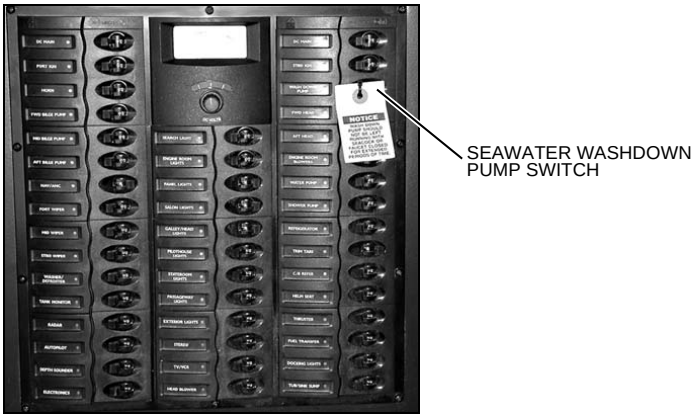


Seawater Washdown Intake Seacock: Located in the port forward area of the lazarette bilge.

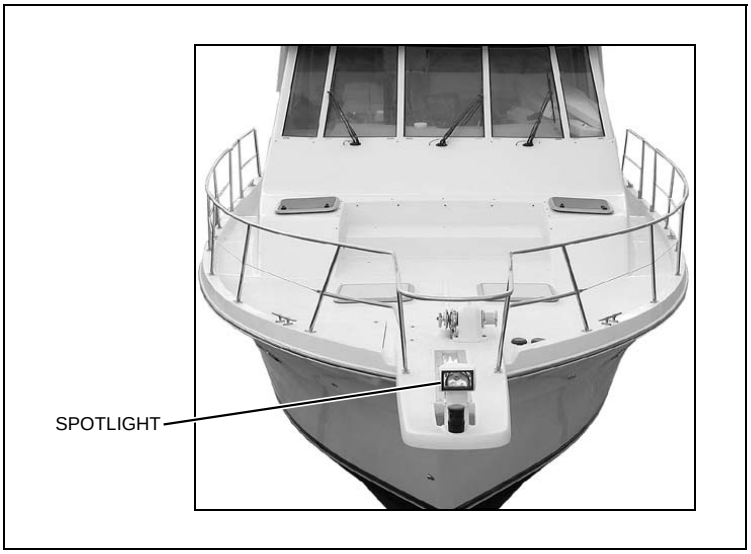


Seawater Washdown Pump Switch: Located on the 12-volt DC main distribution panel.

12-VOLT DC MAIN DISTRIBUTION PANEL



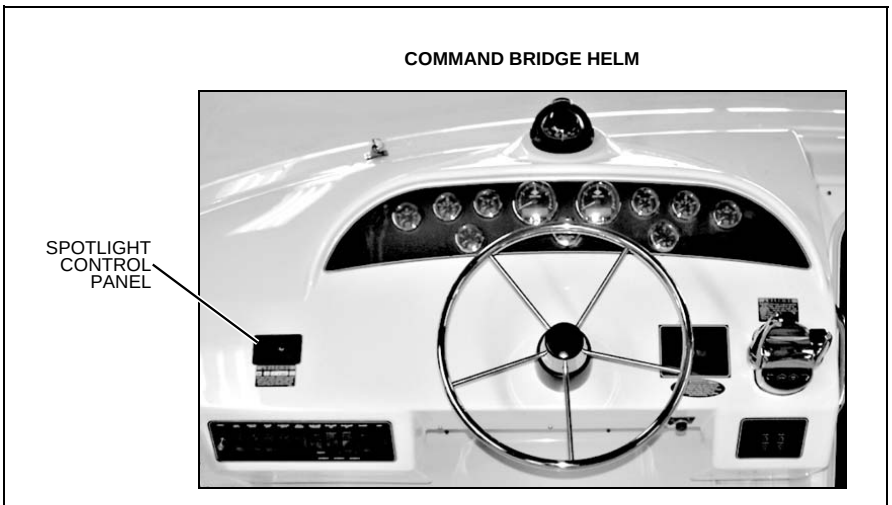
Spotlight: Located on the bow platform.



Spotlight Control Panels (2 Total):

- One is located at the command bridge helm.

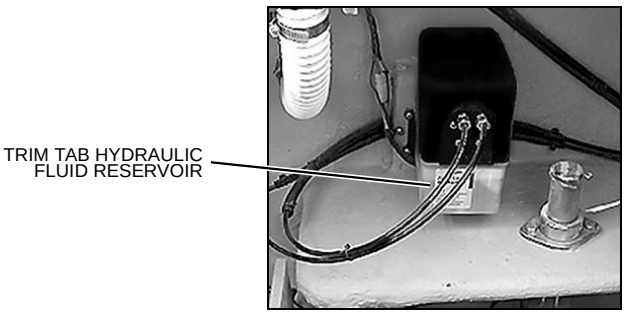
COMMAND BRIDGE HELM



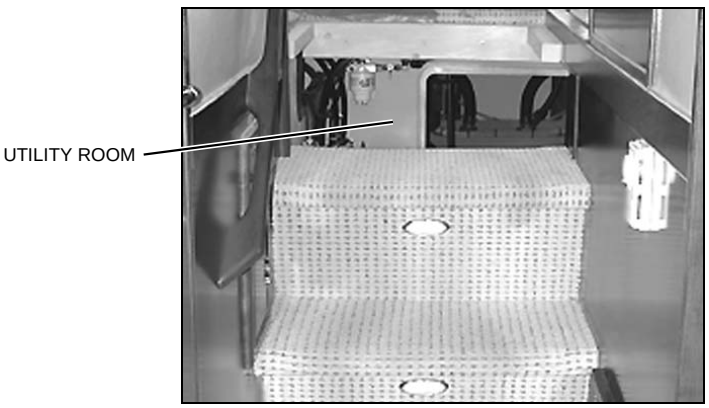
- One is located on the switch panel at the pilothouse helm.

PILOTHOUSE HELM

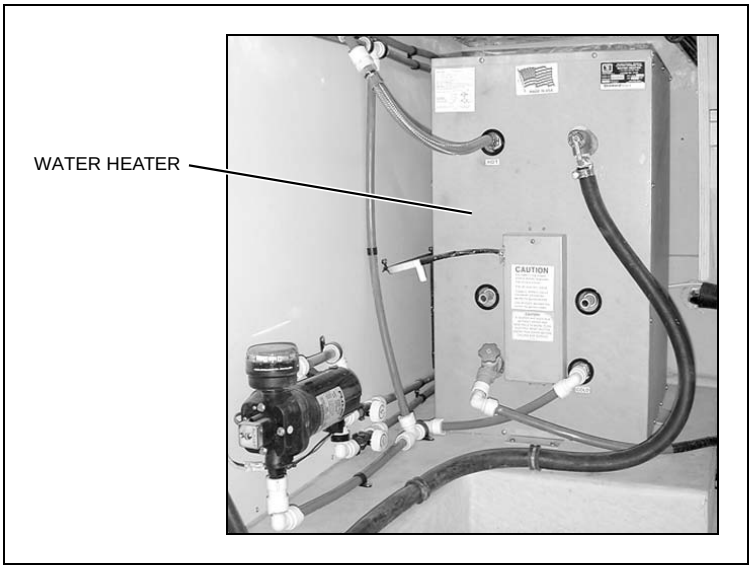
Trim Tab Hydraulic Fluid Reservoir: Located on the starboard aft wall in the lazarette.



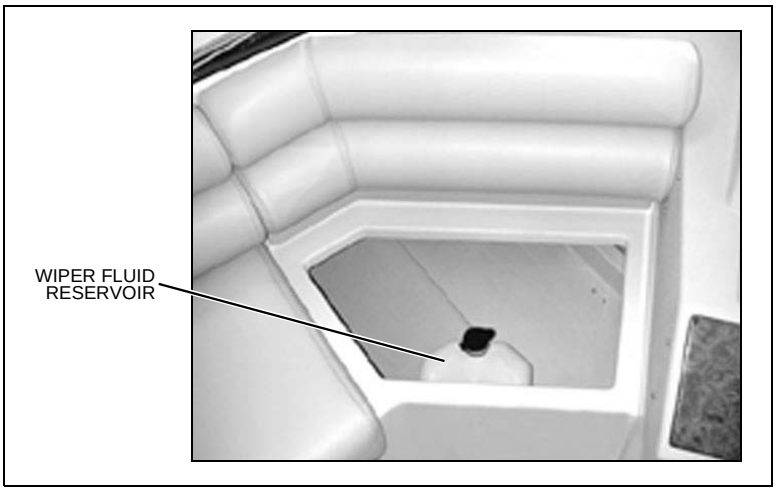
Utility Room: Access the utility room by lifting the top step of the salon stairs.



Water Heater: Located in the port forward corner of the utility room.



Windshield Wiper Fluid Reservoir: Located under the port forward lounge cushion in the pilothouse.



Chapter 3: Propulsion & Related Systems

Engines

NOTICE

Read the engine manual *BEFORE* starting or working on your engines.

While the topics listed below may be included in this *Owner's Manual* and in the *Cruiser & Yacht Owner's Manual Supplement*, ***always*** refer to the engine manual first for specific information on these important subjects:

- Engine Break-in Procedure
- Engine Starting and Stopping
- Gear Shifting
- Fuel and Oil Recommendations
- Engine Maintenance
- Engine Storage/Winterization

Engine Cooling System

⚠ WARNING!

FLOODING and SWAMPING HAZARD!

- ***Close* the seacock(s) when leaving your yacht unattended for any length of time.**
- **If a seacock is left open, a hose failure could flood the bilge, swamp the batteries and the engines, and even sink your yacht.**

⚠ CAUTION

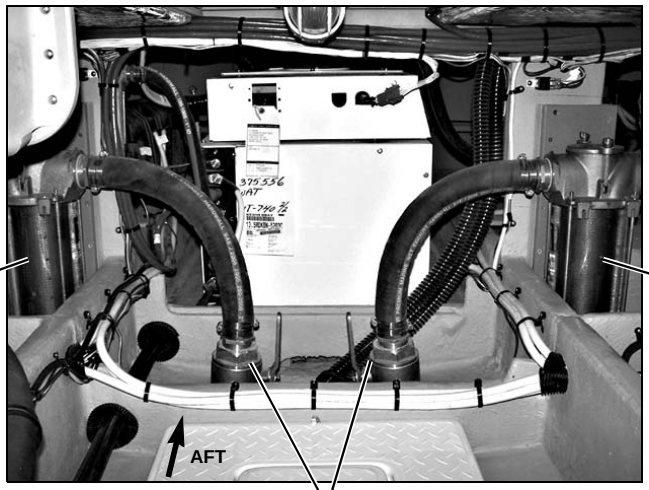
SYSTEM DAMAGE HAZARD!

- ***Open* the engine cooling system seacocks *BEFORE* starting the engines.**
- **Keep the engine cooling system seacocks *Open* while the engines are running.**

Refer to the engine operation manual for cooling system details.

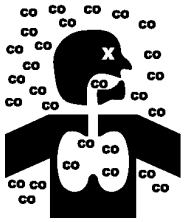
- ***Open*** the seawater intake seacock for each engine ***before*** starting the engines.
- Keep the seacocks ***Open*** while the engines are running.
- Check the cooling system's seawater strainers for leaks and debris ***every time*** you use your yacht.
- See the *Seawater Systems* section in *Chapter 6* of this *Owner's Manual* for instructions about cleaning the seawater strainers.

NOTE: VALVES SHOWN IN OPEN POSITION.



Exhaust System

⚠ DANGER!

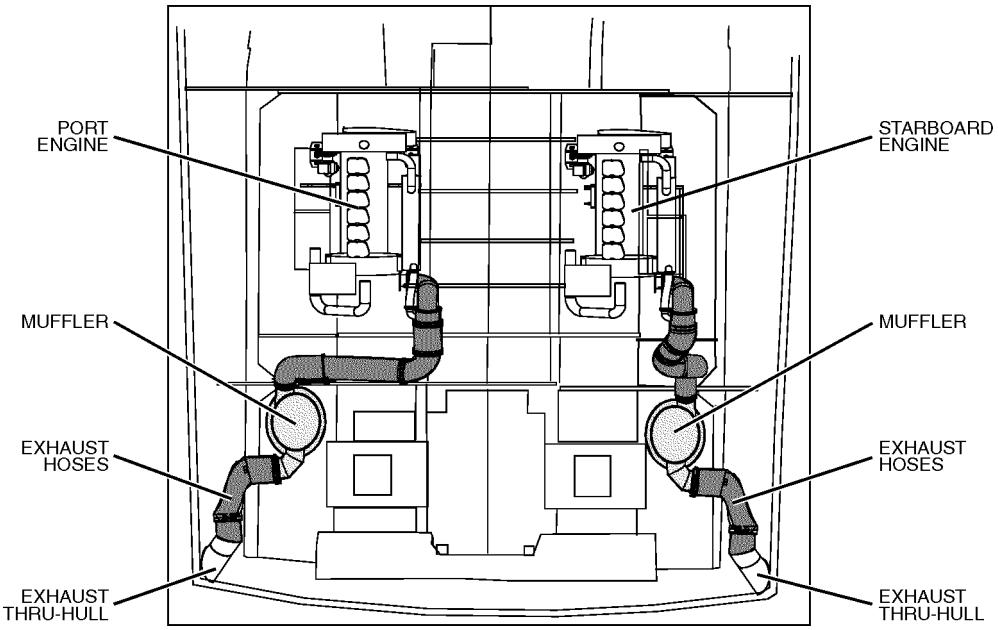


CARBON MONOXIDE POISONING HAZARD!

Leaking engine and/or generator exhaust is a source of dangerous carbon monoxide gas (CO).

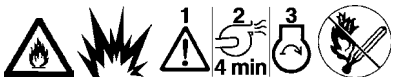
- **Check *ALL* exhaust systems *BEFORE* each trip.**
- **Look for leaks in the exhaust systems of the engines and the generator.**
- **Look for discoloration, water leaks, carbon or stains around *ALL* joints.**
- **Make sure *ALL* of the exhaust clamps are in place and secured.**
- **Make sure the ventilation systems work and are *NOT* obstructed or restricted.**
- **To reduce the chance of CO entering the living spaces, fill any gaps around engine room plumbing, cableways, exhaust systems, doors, hatches, and access panels.**
- **Read the *Carbon Monoxide (CO)* section of *Chapter 1* in this *Owner's Manual*.**

- ***Always*** consider the sea conditions ***before*** anchoring or shutting ***Off*** the engines.
- The exhaust system is designed to keep seawater out of the engines in most sea conditions.
- However, do ***not*** anchor the stern to sea or shut the engines ***Off*** if high seas might flood the exhaust system.



Bilge Blower Systems

⚠ WARNING!



FIRE and EXPLOSION HAZARD!

Fuel vapors can explode! *BEFORE* starting the engines:

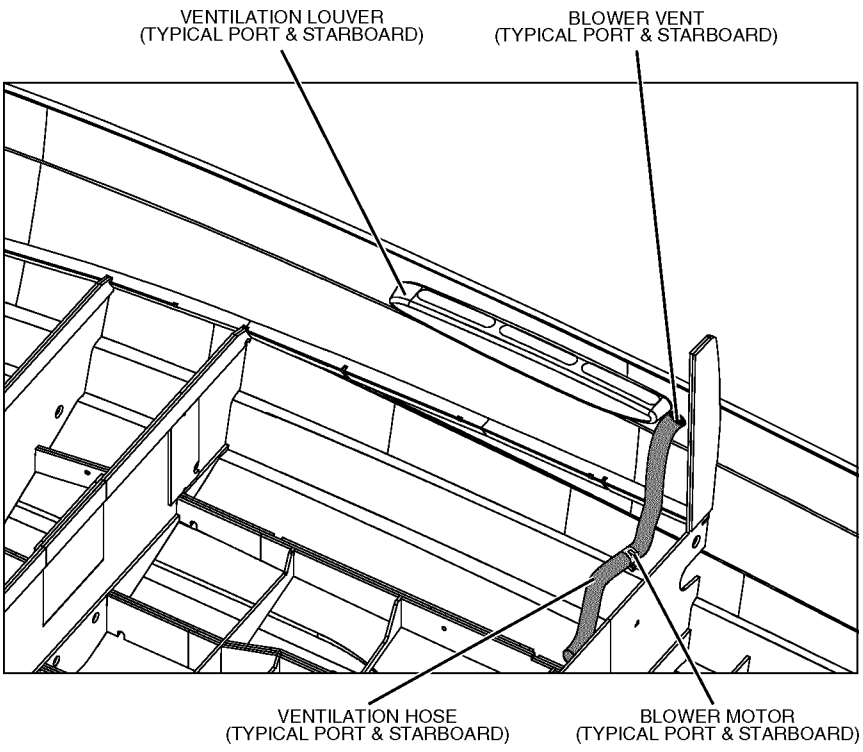
1. **Check the bilge areas for fuel vapors or leaking fuel. If you see leaking fuel or smell fuel vapors:**
   a. **Do *NOT* start the engines or generator, do *NOT* turn *On* any electrical devices, put out *ALL* cigarettes, cigars, and other sources of flame or ignition.**
   b. **Get everyone off your yacht.**
   c. **Get trained help to find and fix the problem.**
2. **Run the bilge blowers for at least four minutes *BEFORE* engine starting, generator starting, electrical system work, or turning on electrical devices.**

- **If you smell fuel vapors and the engines and/or generator are already running;**
  a. **Shut *Off* the engines and/or generator, and turn *Off ALL* electrical devices.**
  b. **Put out *ALL* cigarettes, cigars, and other sources of flame or ignition.**
  c. **Get trained help to find and fix the problem.**
- ***NEVER* obstruct or change the bilge blower system.**

- The bilge blowers remove explosive fumes from the engine room and lazarette bilge areas.
- Fresh air is drawn into these compartments through the vents.

To make sure the bilge areas are properly ventilated:

- ***Always*** run the bilge blowers for at least four minutes ***before*** starting the engines or the generator.
- Use the "sniff test" to check the bilge areas for fuel vapors ***before*** starting the engines or the generator.
- Continue to run the blowers until your yacht has reached cruising speed.
- ***Always*** run the blowers when operating your yacht below cruising speed.



Fuel System

⚠ WARNING!

FIRE, EXPLOSION and OPEN FLAME HAZARD!

- **It is very important that the fuel system be inspected thoroughly the first time it is filled and at each subsequent filling.**
- **Read the fueling instructions in the engine operation manual and the *Cruiser & Yacht Owner's Manual Supplement.***

⚠ CAUTION

Avoid the storage or handling of gear near the fuel lines, fittings and tank.

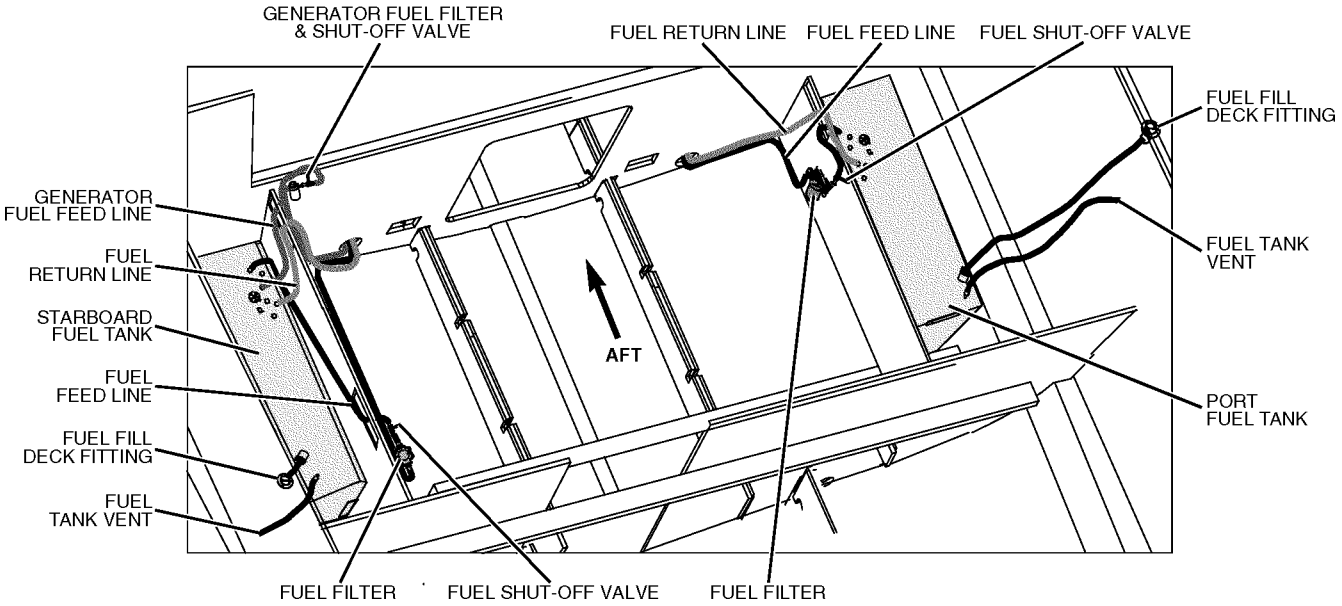
NOTICE

- **Air in the diesel supply system can stop an engine or severely restrict performance.**
- **If you suspect air in the fuel lines, refer to your engine operation manual for detailed instructions on how to bleed the system.**

NOTICE

Carefully read the fuel section of both the *Cruiser & Yacht Owner's Manual Supplement* and the engine operation manual, paying special attention to the subject of *fuel recommendations*.

DIESEL ENGINE FUEL LINE ROUTING



Fuel Fills & Vents

- The fuel fill deck fittings are marked DIESEL.
- If you have problems filling either fuel tank, see if the fuel fill hose or fuel tank vent hose is kinked or collapsed.
- If there are no visible signs of a problem, contact your local dealer.

Fuel Filter/Water Separators

NOTICE

Refer to the fuel filter/water separator manual for important service instructions.

Shaft-Transmission Alignment

⚠ CAUTION

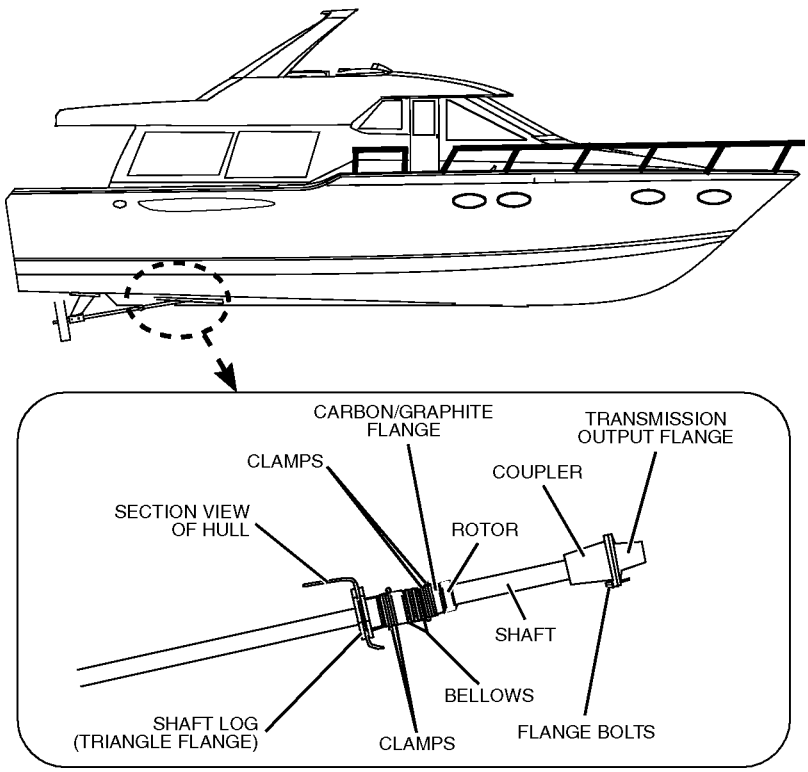
SYSTEM DAMAGE HAZARD!

- **If you suspect a shaft-transmission alignment problem, have a trained mechanic inspect the alignment as soon as possible.**
- **Continued use may lead to premature engine, transmission, shaft, shaft seal and/or hull damage!**

Alignment between the engine transmission output shaft and the propeller is critical. The alignment was done at the factory and was rechecked by the dealer after your yacht had been in the water for 48 hours.

- Have a marine mechanic inspect the alignment after the first 30 hours of operation. From then on, have the alignment rechecked after every 60 hours of operation. At any time, if unusual noise or vibration is noticed, have the alignment inspected ***immediately***.
- Shaft-transmission alignment should be done by a marine mechanic since it requires moving the engine and prop shaft.
- To insure proper alignment after a haul out or dry storage, wait 48 hours after launching ***before*** final alignment adjustments by a marine mechanic are made.

TRANSMISSION-TO-PROP SHAFT COMPONENTS (TYPICAL)



Shaft Log Packless Sealing System

Read the PSS Shaft Seal Installation Instructions for maintenance and inspection details.

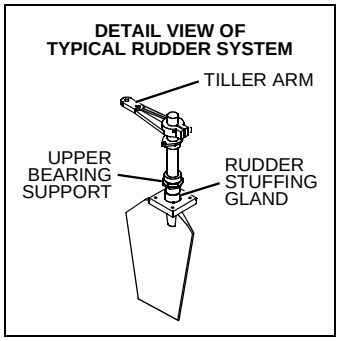
Chapter 4: Controls & Gauges

Hydraulic Steering System

- Your yacht features a hydraulic steering system.
- Check the fluid level in the hydraulic steering reservoir at each helm ***every time*** you use your yacht.
- Yacht steering is ***not*** self-centering.

Rudder Stuffing Gland

- The rudder stuffing gland is part of the assembly where the rudders emerge from the bottom of your yacht.
- The rudder stuffing gland should ***not*** leak any water.
- If a leak develops, you can usually stop it by ***slightly*** tightening the stuffing gland nuts.
- Do ***not*** over tighten the stuffing gland nuts.
- If leakage becomes excessive, packing replacement can be done as follows:



1. Remove your yacht from the water.
2. Loosen the stuffing gland nuts and back the stuffing gland from the sleeve.
3. Remove the old packing.
4. Wrap new packing around the shaft.
5. Cut the rings with a razor blade at an angle approximately 30 degrees to the long axis of the shaft.
6. Stagger the ends of each ring around the shaft and insure that the rings are at the bottom in the sleeve.
7. Tighten the stuffing gland nuts until resistance is felt.

Shift/Throttle Controls

⚠ WARNING!

LOSS OF CONTROL HAZARD!

Improper maintenance of shift/throttle hardware may cause a sudden loss of control!

- Your yacht will have either mechanical or electronic shift/throttle controls. The operation of these two types of controls varies. Make sure you know which type of controls your yacht has.
- Read ***all*** of the information about the shift/throttle controls in the shift/throttle controls' manual, the engine operation manual, and the *Cruiser & Yacht Owner's Manual Supplement.*

Compass

NOTICE

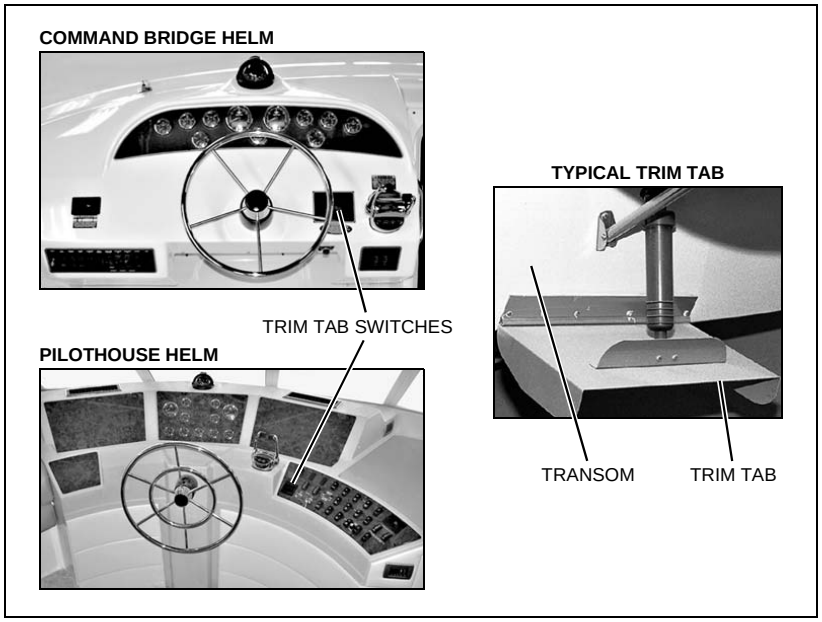
- **Compass accuracy can be affected by many factors.**
- **Have a trained technician calibrate your compass.**
- **Make sure the technician gives you a deviation card which shows the corrections to apply in navigational calculations.**
- **Keep a copy of the deviation card at each helm.**

Engine Synchronization (If Equipped)

Follow the instructions in the synchronization section of the shift/throttle controls' manual.

Trim Tabs

- ***Before*** using the trim tabs, read the trim tabs' owner's manual.
- The trim tabs are controlled by two rocker switches at the helm.
- Check and refill the trim tab hydraulic fluid reservoir as directed in the trim tabs' owner's manual. For the location of the fluid reservoir, see the *Component Locations* section in *Chapter 2* of this *Owner's Manual*.



Gauges

Cleaning the Gauges

⚠ CAUTION

PRODUCT or PROPERTY DAMAGE HAZARD!

- **Use *ONLY* mild soap and water to clean the gauge lenses and bezels.**
- **Use of other cleaners, including common window cleaning solutions, may cause the lenses to crack.**
- **Lenses cracked in this manner will *NOT* be covered by our warranty.**

Gauge Fogging

- Moisture may occasionally find its way into the gauges causing lens fogging.
- Turning ***On*** the gauge lights will help dry the lenses.
- Fogging will not harm the gauges.

Radio Transmission Interference

VHF or other radio transmissions may cause brief erratic readings on the tachometers. This will not damage these gauges or affect their accuracy when the radio is not transmitting.

Twin Engine Readings

It is normal for tachometers and other gauges to have slightly different readings between engines.

Fuel Gauges

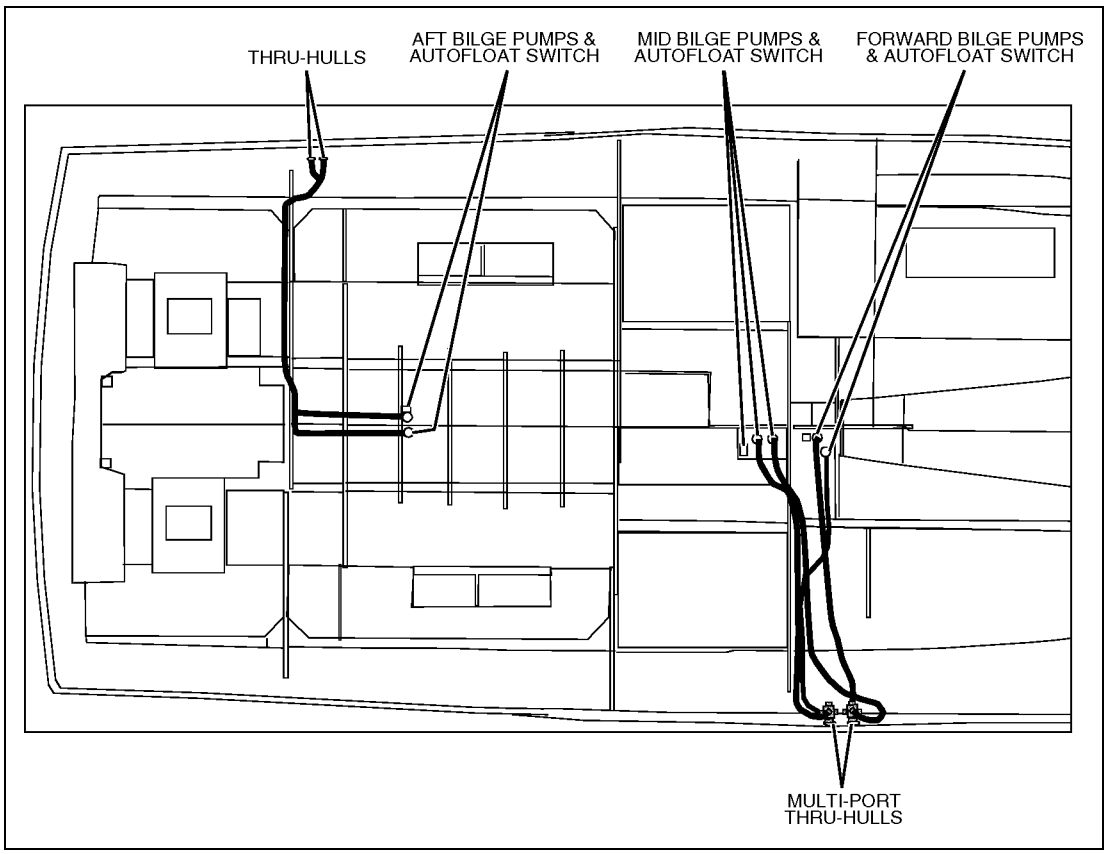
It is normal for the pointers on your fuel gauges to bounce as fuel sloshes back and forth in the fuel tanks.

Chapter 6: Plumbing

Bilge Pumps

NOTICE

Discharge of oil, oil waste or fuel into navigable waters is prohibited by law. Violators are subject to legal action by the local authorities.


THRU-HULLS
AFT BILGE PUMPS & AUTOFLOAT SWITCH
MID BILGE PUMPS & AUTOFLOAT SWITCH
FORWARD BILGE PUMPS & AUTOFLOAT SWITCH
MULTI-PORT THRU-HULLS

- Your yacht has several bilge pumps for pumping water out of the bilge.
- The autofloat switches, mounted next to the bilge pumps, will turn ***On*** the bilge pumps if bilge water rises above a preset level.
- You can also turn ***On*** the bilge pumps using the switches at the helm.
- The bilge pumps are wired directly to the battery. Unless the battery is dead, the bilge pump system should work even when your yacht is unattended.

Bilge Pump Testing

- The bilge pumps are vital to the safety of your yacht.
- Test the bilge pumps often to make sure they are working properly.

1. One at a time, turn ***On*** the bilge pump switches at the helm.
2. Make sure that water in the bilge is pumped overboard.

If there is water in the bilge and a pump motor is running, but ***not*** pumping, inspect the discharge hose for a kink or collapsed area.

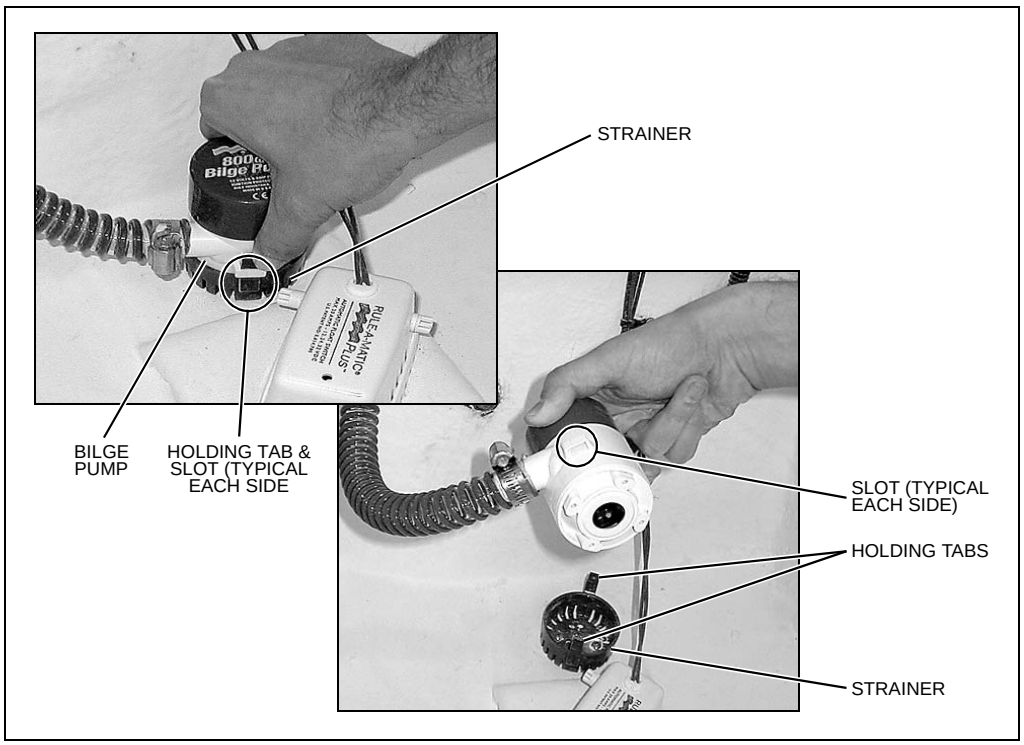
If the discharge hose looks okay, check the bilge pump and strainer for clogging debris.

Checking the bilge pump and strainer for clogging debris:

1. With your thumb and forefinger, squeeze the holding tabs on each side of the strainer.
2. Lift out the bilge pump.
3. Check the pump and strainer and clear any debris.

Reinstalling the bilge pump:

1. Align the tabs on the strainer with the slots on the pump.
2. Press down firmly until the tabs click into place.
3. Make sure the bilge pump is locked into place.



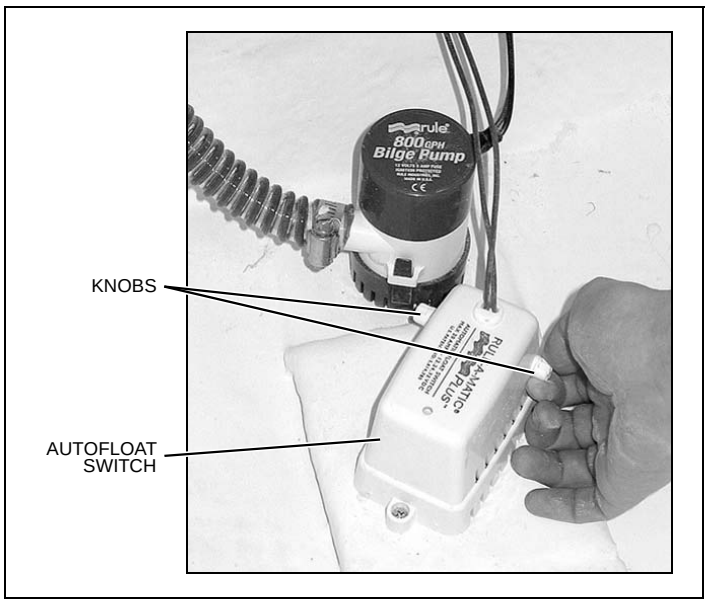
Autofloat Switches

- Each automatic bilge pump features an autofloat switch.
- The autofloat switch turns the pump ***On*** when water rises above a preset level.
- Each autofloat switch is normally located next to the bilge pump it controls.
- The autofloat switches should be tested often.

Autofloat switch testing:

1. Twist either of the white plastic knobs one quarter turn to lift the float and turn ***On*** the bilge pump.

- If the pump does not turn ***On***, check the push-to-reset circuit breaker.
- If the circuit breaker is good, but the switch still does not work, it may mean the switch is bad, or the battery is dead.



Seawater Systems

Seacocks

⚠ WARNING!

FLOODING and SWAMPING HAZARD!

- ***Close* the seacock(s) when leaving your yacht unattended for any length of time.**
- **If a seacock is left open, a hose failure could flood the bilge, swamp the batteries and the engines, and even sink your yacht.**

⚠ CAUTION

SYSTEM DAMAGE HAZARD!

- ***BEFORE* using any system that has a seacock, make sure that the system's seacock is *Open*.**
- **Inspect and lubricate all seacocks annually.**

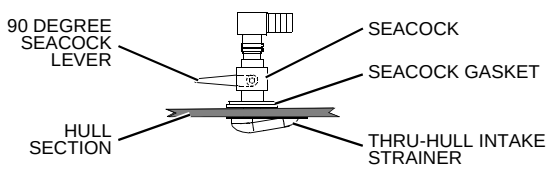
Thru-hull inlet or outlet fittings near or below the waterline feature seacock valves. You can close a seacock to stop water entry:

- If the hose connected to the seacock fails, or;
- To work on equipment served by the seacock.

Seacocks are used on your yacht in seawater intake or liquid-discharge systems including, but not limited to:

- Engines
- Generator
- Air conditioner (if equipped)
- Marine head

SEACOCK & THRU-HULL COMPONENTS (TYPICAL)



Before using any system with a seacock, make sure the seacock is ***Open*** and stays ***Open*** until the system is shut ***Off***.

Seawater Strainers

⚠ CAUTION

FLOODING HAZARD!

- ***BEFORE* taking apart a seawater strainer for cleaning or other work, *Close* the seacock that sends seawater to that strainer.**
- **Failure to close the seacock before taking apart the seawater strainer may allow large amounts of water to flood the bilge, which could swamp the batteries and the engines, and even sink your yacht.**
- **Keep the seacock *Closed* until the seawater strainer is completely reassembled.**

SYSTEM DAMAGE HAZARD!

- **After putting the seawater strainer back together, make sure that the seacock valve is *Open BEFORE* using the component/system.**

- Seawater strainers are used to filter incoming seawater in *some* seawater intake systems. NOTE: Not all seawater intake systems have seawater strainers.
- If equipped, the seawater strainer is located near the seawater intake system's seacock.
- Check the strainers for leaks and/or debris ***every time*** you use your yacht.
- Refer to the seawater strainer instruction sheet for cleaning and maintenance information.

Seawater Washdown

⚠ WARNING!

FLOODING and SWAMPING HAZARD!

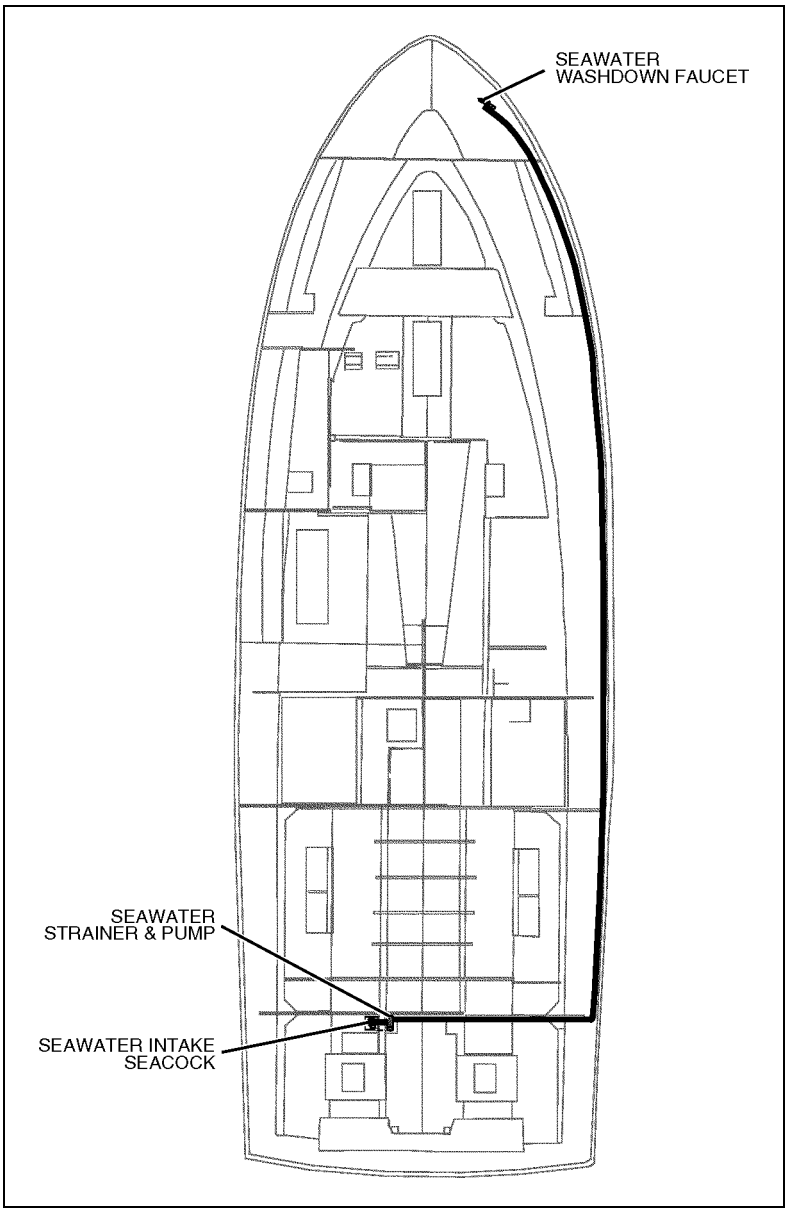
- ***NEVER* leave your yacht unattended while the seawater washdown system is running.**
- **Any leak or break in this system may allow large amounts of water to flood the bilge, which could swamp the batteries and the engines, and even sink your yacht.**
- ***Close* the intake seacock when leaving your yacht unattended for any length of time.**

⚠ CAUTION

SYSTEM DAMAGE HAZARD!

***BEFORE* turning *On* the seawater washdown system, make sure the intake seacock is *Open*.**

- ***Always*** make sure the seawater intake seacock is ***Open before*** turning the seawater washdown system ***On***.
- Turn ***On*** the seawater washdown pump switch to pressurize this system. For the location of the seawater washdown pump switch, see the *Component Locations* section in *Chapter 2* of this *Owner's Manual*.

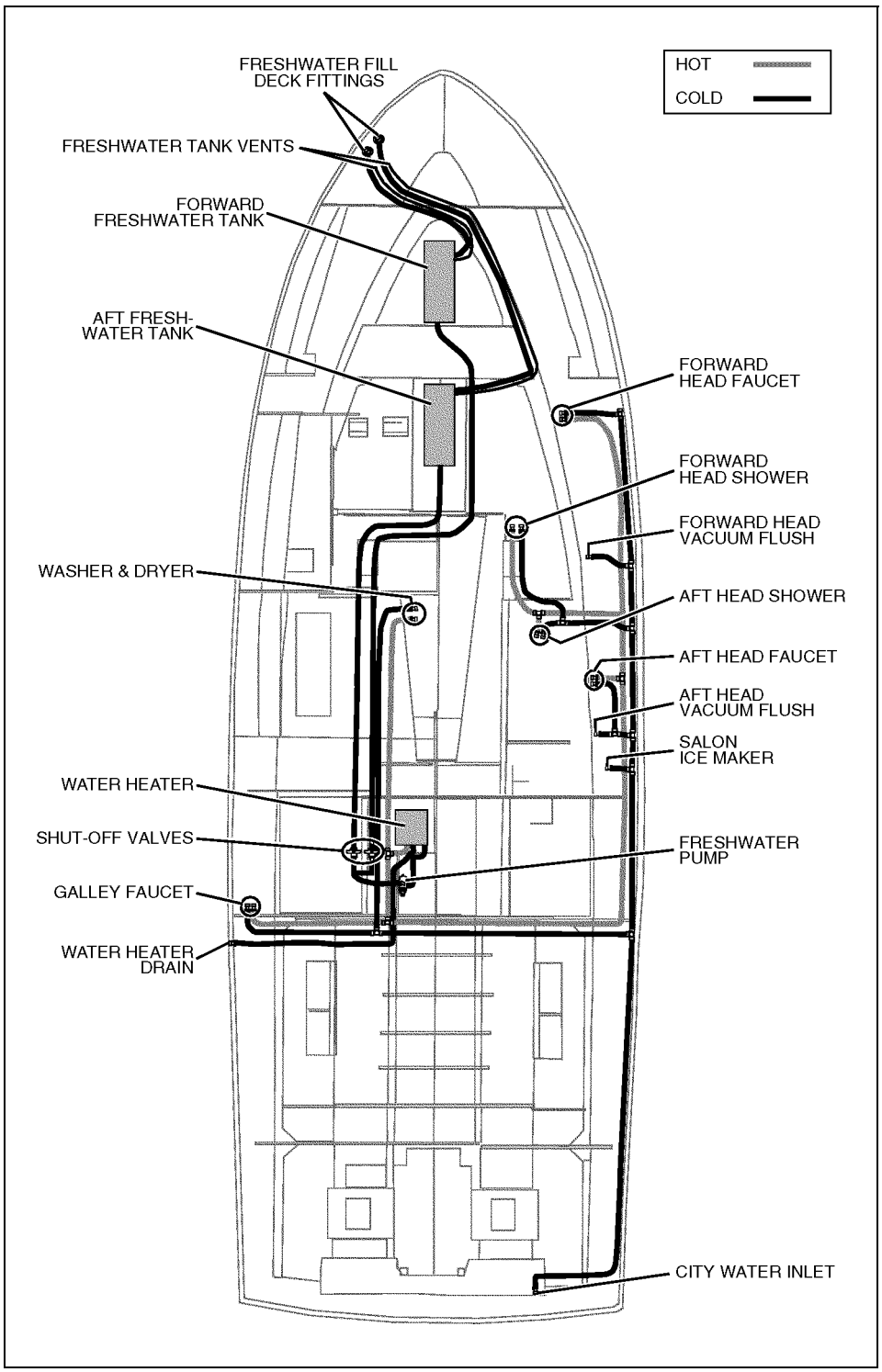


Freshwater System

⚠ WARNING!

- ***ONLY* use safe drinking (potable) water in your yacht's freshwater system.**
- ***ONLY* use FDA approved "drinking water safe" hoses when filling the freshwater tank or connecting to city water.**
- ***NEVER* use a common garden hose for drinking water.**

- Read the *Freshwater System* section in the *Cruiser & Yacht Owner's Manual Supplement*.
- Your yacht is equipped with a pressure type (demand) freshwater (potable) system.
- Pressurize the freshwater system by either:
  a. turning ***On*** the freshwater pump switch (the battery switch must also be ***On***) or;
  b. connecting to city water.
- For the locations of the freshwater pump switch and the city water inlet, see the *Component Locations* section in *Chapter 2* of this *Owner's Manual*.
- ***Always*** turn ***Off*** the city water supply on the dock before leaving your yacht unattended.
- Turn ***Off*** the freshwater pump switch when your yacht is not in use or when the freshwater tank is empty.
- Inspect and clean the freshwater filter often (located on the freshwater pump).
- If your yacht is to be left unattended for a long period of time, pump the freshwater tank dry to prevent stored water from becoming stagnant and distasteful.
- If the freshwater system needs to be disinfected, ask your dealer about the treatments available.



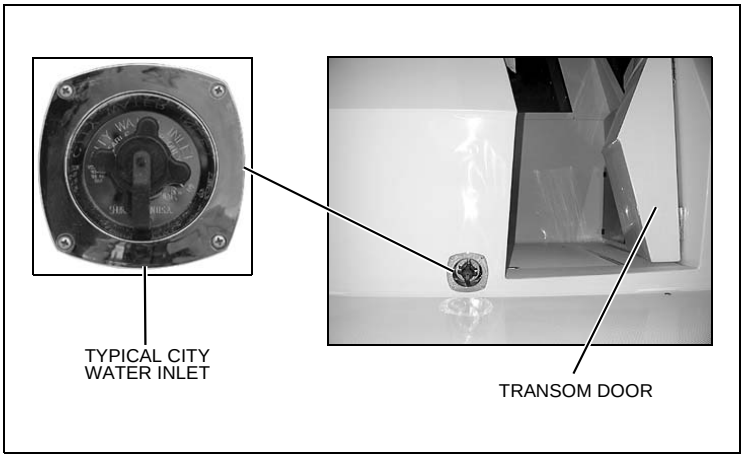
City Water Inlet

⚠ WARNING!

FLOODING and SWAMPING HAZARD!

- ***NEVER* leave your yacht unattended while the freshwater system is pressurized by city water.**
- **Any leak or break in this system may allow large amounts of water to flood the bilge, which could swamp the batteries and the engines, and even sink your yacht.**
- ***ALWAYS* turn *Off* the city water supply on the dock before leaving your yacht unattended.**

- Read the *City Water Hookup* portion of the *Freshwater System* section in the *Cruiser & Yacht Owner's Manual Supplement.*
- The freshwater pump's 12-volt DC breaker ***must*** be ***Off*** while the freshwater system is being pressurized by a city water supply.



Freshwater System Winterization

1. Turn ***Off*** the water heater breaker on the 110-volt AC master panel.
2. Turn ***On*** the freshwater pump switch.
3. ***Open all*** of the faucets and showers and let the freshwater system drain completely.
4. Turn ***Off*** the freshwater pump switch.

All remaining water ***must*** be removed from the water lines. There are two ways to remove the remaining water from the lines:

- Compressed Air
- Gravity Draining

Compressed Air

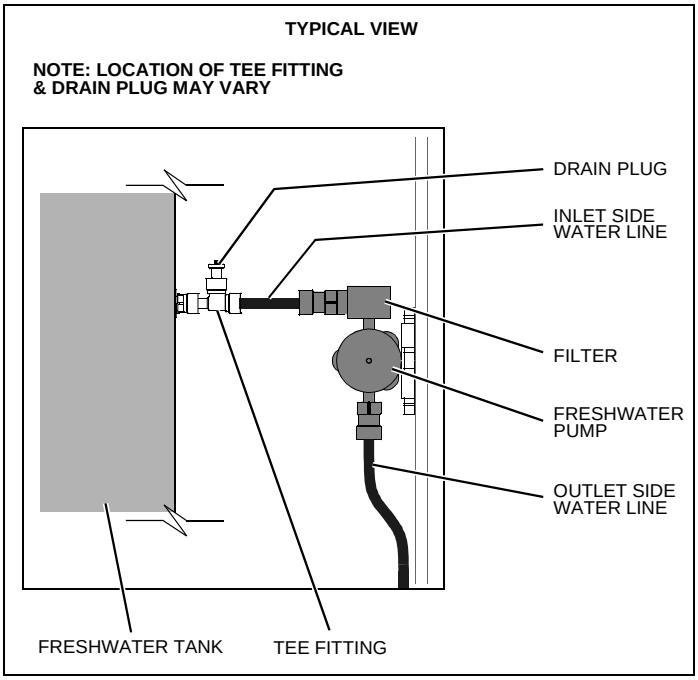
⚠ CAUTION

FRESHWATER SYSTEM DAMAGE HAZARD!

- **A faucet *MUST* be *Open* when compressed air is blown through the freshwater system.**
- ***NEVER* blow compressed air through the water system when *ALL* of the faucets are *Closed*.**

You ***must*** have an air compressor with an air hose and an air nozzle.

1. Remove the water line from the outlet side of the freshwater pump (opposite side from filter).
2. ***Open*** the faucet that is furthest away from the freshwater pump.
3. Place the air nozzle against the end of the just removed water line and blow air through the system.
4. When the water stops coming out of the faucet, stop the air and ***Close*** the faucet.
5. One at a time, repeat this process on ***all*** of the faucets and showers.



Gravity Draining

1. ***Open all*** faucets and showers.
2. Remove the drain plug from the tee fitting on the freshwater tank.
3. When the water has stopped draining from the freshwater tank and the water lines, replace the drain plug.

Water Heater

⚠ WARNING!

SCALDING HAZARD!

Water heated by the water heater can be hot enough to scald the skin.

⚠ CAUTION

WATER HEATER DAMAGE HAZARD!

- **Do *NOT* turn *On* the water heater electrical circuit on the 110-volt AC master panel until the water heater tank is *COMPLETELY* filled with water.**
- **The tank is full if water flows from the tap when the hot water is turned *On* in the galley.**
- **Even brief water heater operation with a dry tank *WILL* damage the heating elements.**
- **Warranty replacements will *NOT* be made on elements damaged in this manner.**
- **Turn the power *Off* and drain the water heater when the chance of freezing exists (see winterizing instructions below).**

NOTICE

If 110-volt AC power is being provided by shore power or generator power, but the water heater is not working:

- **Make sure the water heater circuit breaker on the 110-volt AC master panel is switched *On*.**
- **If the circuit breaker is *On*, but the water heater is still not working, ask your dealer how to check the push-to-reset circuit breaker located on the water heater.**

- Read the water heater instruction manual and heed the warnings above.
- The water heater is connected to the 110-volt AC power system.
- To heat the water, turn ***On*** the water heater breaker on the 110-volt AC master panel.

Winterizing the Water Heater

⚠ CAUTION

WATER HEATER DAMAGE HAZARD!

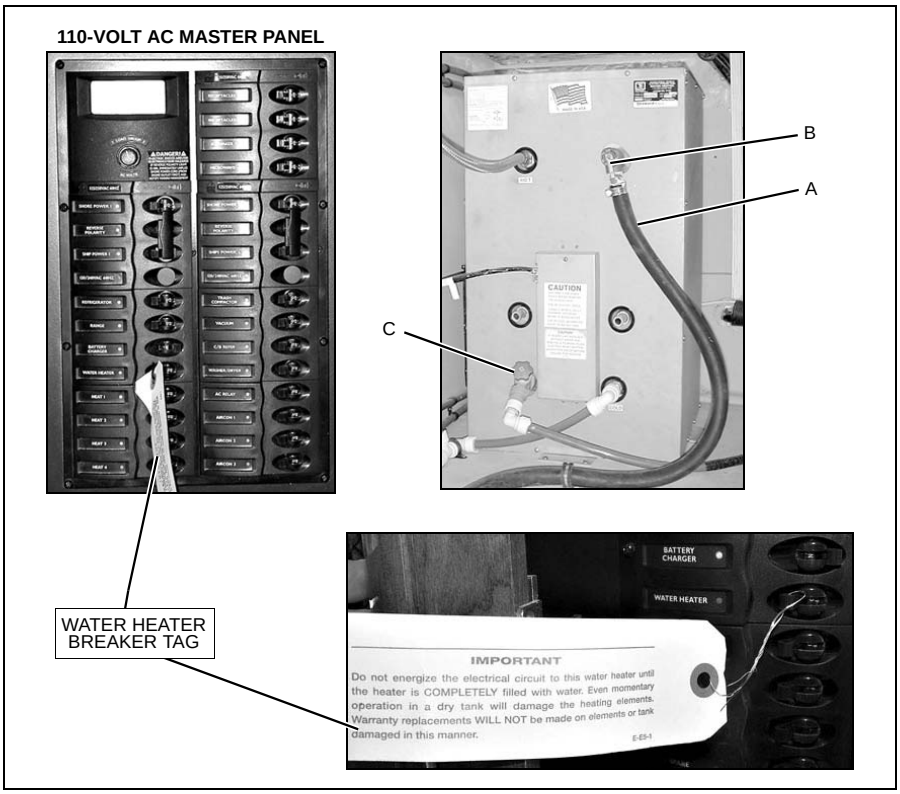
- ***NEVER* turn *On* the water heater breaker on the 110-volt AC master panel while the water heater tank is empty.**
- **Even brief water heater operation with a dry tank *WILL* damage the heating elements.**
- **Warranty replacements will *NOT* be made on elements damaged in this manner.**
- **To prevent damage to the water heater after winterizing, always label the breaker switch on the 110-volt AC master panel as 'winterized'.**

NOTICE

The freshwater system *MUST* be drained *BEFORE* winterizing the water heater (see the *Freshwater System Winterization Instructions* earlier in this section).

1. Turn ***Off*** the water heater breaker.
2. Disconnect the hose (A) attached to the pressure relief valve (B).
3. If there is any water in this hose, drain it into the bilge or into a bucket.
4. ***Open*** the pressure relief valve (B).
5. ***Open*** the drain valve (C).
6. Attach a tag to the water heater breaker to indicate that the tank is empty.

- NOTE: Your yacht came with a tag attached to the water heater breaker. It is suggested that you keep this tag and re-use it when winterizing.
- Leave the pressure relief and drain valves ***Open*** until you fit out your yacht after storage.


110-VOLT AC MASTER PANEL
B
A
C
WATER HEATER BREAKER TAG
BATTERY CHARGER
WATER HEATER
IMPORTANT
Do not energize the electrical circuit to this water heater until the heater is COMPLETELY filled with water. Even momentary operation in a dry tank will damage the heating elements. Warranty replacements WILL NOT be made on elements or tank damaged in this manner.

Preparing the Water Heater for Use After Yacht Storage

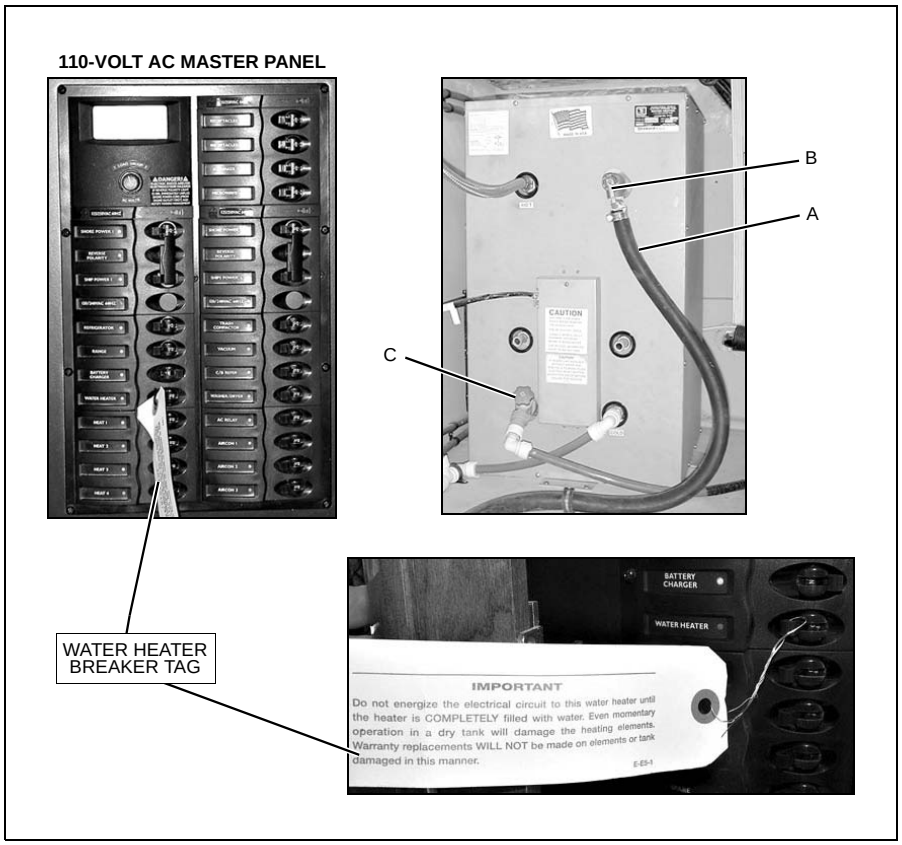
⚠ CAUTION

WATER HEATER DAMAGE HAZARD!

- **Fill the water heater tank *BEFORE* turning *On* the water heater breaker on the 110-volt AC master panel.**
- ***NEVER* turn *On* the water heater breaker on the 110-volt AC master panel while the water heater tank is empty.**
- **To test if the tank is full, turn *On* a hot water faucet. If water flows from the tap, the water heater tank is full.**
- **Even brief water heater operation with a dry tank *WILL* damage the heating elements.**
- **Warranty replacements will *NOT* be made on elements damaged in this manner.**

When you are ready to resume use of your yacht after it has been in storage, prepare the water heater for use as follows:

1. ***Close*** the drain valve (C).
2. ***Close*** the pressure relief valve (B).
3. Connect the hose (A) to the pressure relief valve (B).
4. Fill the water heater tank with freshwater.
5. Remove the 'winterized' tag on the water heater breaker on the 110-volt AC master panel ***after*** the water heater tank is ***completely*** filled with freshwater.
6. Turn ***On*** the water heater breaker.


110-VOLT AC MASTER PANEL
B
A
C
WATER HEATER BREAKER TAG
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WATER HEATER
IMPORTANT
Do not energize the electrical circuit to this water heater until the heater is COMPLETELY filled with water. Even momentary operation in a dry tank will damage the heating elements. Warranty replacements WILL NOT be made on elements or tank damaged in this manner.

Drain Systems

Deck Drains

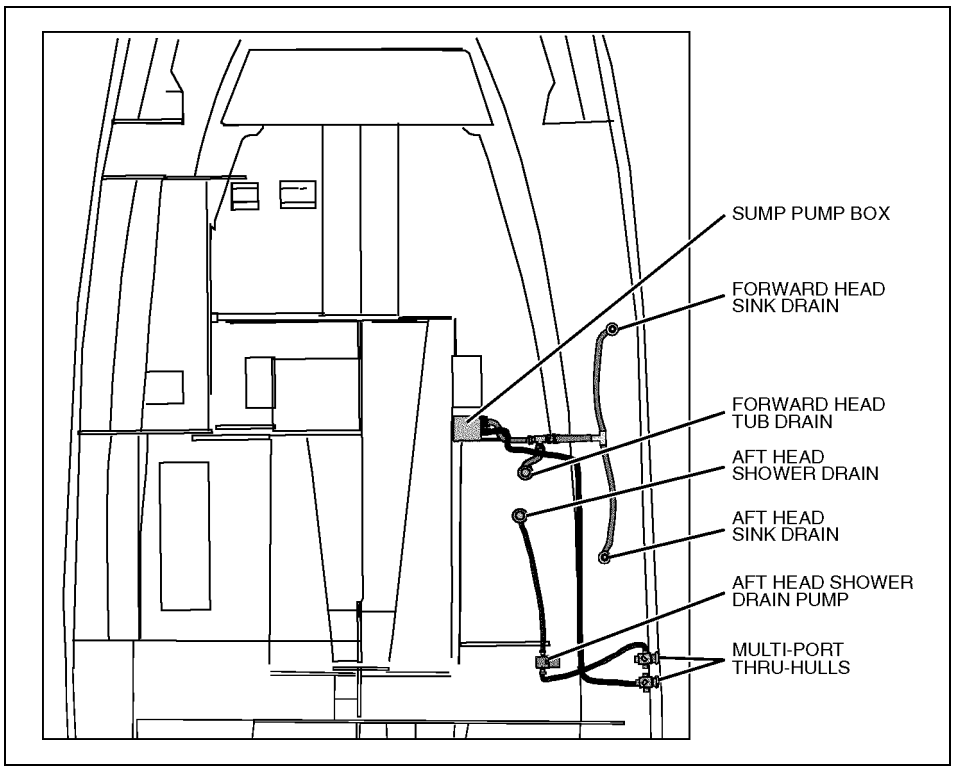
- Water on the deck is drained overboard through the deck drains.
- Keep the deck drains free of debris.

Gray Water Drain System

- The galley sink is above the waterline and is gravity drained overboard.
- The aft head shower drain is below the waterline and is pump drained overboard.
- Other gray water below the waterline drains into a sump pump box (see below).

Sump Pump Drain System

- The forward head tub drains into the sump pump box.
- Both the forward and aft head sinks drain into the sump pump box.
- The sump pump box has an autofloat switch.
- When the drain water rises to a preset level, the autofloat switch turns ***On*** the sump pump, and the drain water is pumped overboard.



Sump Box Cleaning

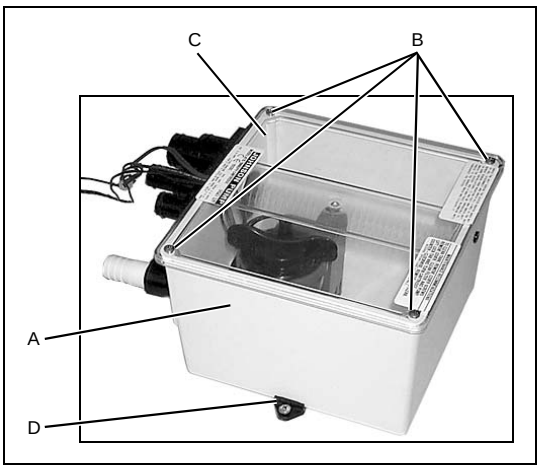
Periodically clean the sump box (A), filter, and pump as follows:

1. Remove the cover screws (B) and the cover (C).
2. Remove any debris from the box and the filter.
3. Clean the sump pump as outlined on the next page.

Sump System Winterization

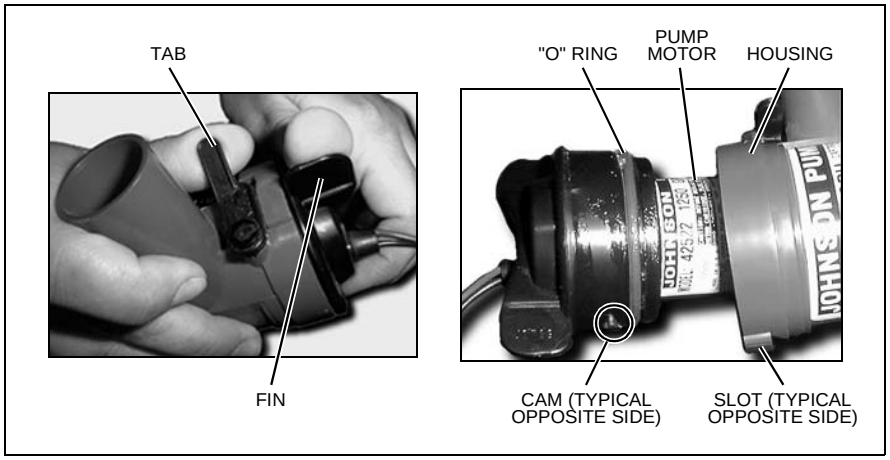
Drain the sump pump system in the months when ***not*** in use.

1. Disconnect and drain ***all*** lines to the unit.
2. Remove the screws from the mounting feet (D) and drain the system.
3. Reinstall the screws in the mounting feet and reconnect the system.



Checking for clogging debris:

1. Remove the pump motor from the housing:
   a. Lift the tab while rotating the fins counter-clockwise.
   b. Lift out the pump motor.
   c. Clear the housing of debris.
2. Reinstall the pump motor:
   a. Make sure the "O" ring is properly seated.
   b. Coat the "O" ring with a light film of vegetable or mineral oil.
   c. Align the cams on either side of the pump motor with the slots on the housing.
   d. Press the pump motor into the housing while twisting clockwise.
3. Check the reinstallation by trying to twist the fins counter-clockwise ***without*** lifting the tab; the pump motor should stay in place.



Autofloat Switch

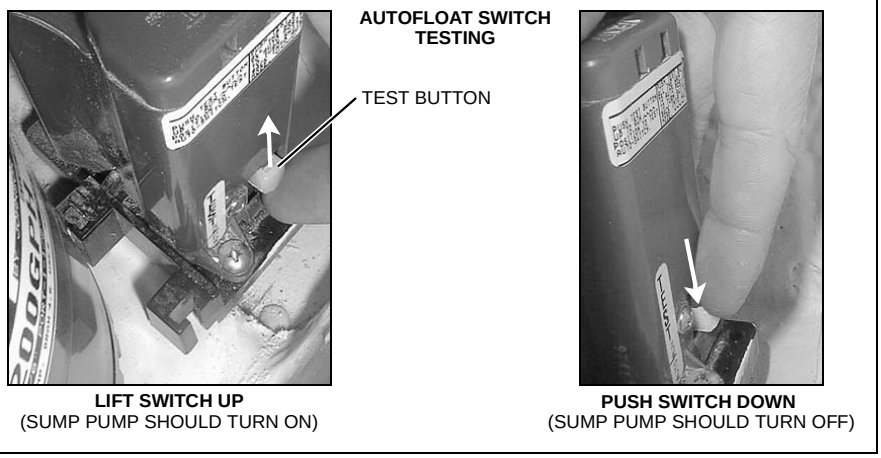
- The autofloat switch turns the sump pump ***On*** when water rises above a preset level.
- Test the autofloat switch often.

Autofloat switch testing:

1. Lift the float switch test button to turn ***On*** the sump pump.

- If the pump does not turn ***On***, check the circuit breaker on the 12-volt DC main distribution panel.
- If the circuit breaker is good, but the switch still does not work, it may mean the switch is bad, or the battery is dead.

2. After testing, push the test button all the way ***down*** to return the float switch to auto mode.



⚠ CAUTION

When the test is completed on the float switch, you *MUST* push the test button *ALL THE WAY DOWN* to return the switch to auto mode!

Marine Heads & Holding Tank

NOTICE

Check with local authorities about the legal use of marine head systems.

Vacuum Flush Head System

- Read the vacuum flush head's operation and maintenance manual.
- The vacuum flush head system uses freshwater from the freshwater tank and a vacuum pump to flush waste from the toilet into the holding tank.
- The holding tank is plumbed to a fitting on the deck for dockside pump-out.
- To check the content level of the holding tank, look at the monitoring gauge. For the location of the holding tank monitoring gauge, see the *Component Locations* section in *Chapter 2* of this *Owner's Manual*.
- Empty the holding tank at every opportunity.

Winterizing the System

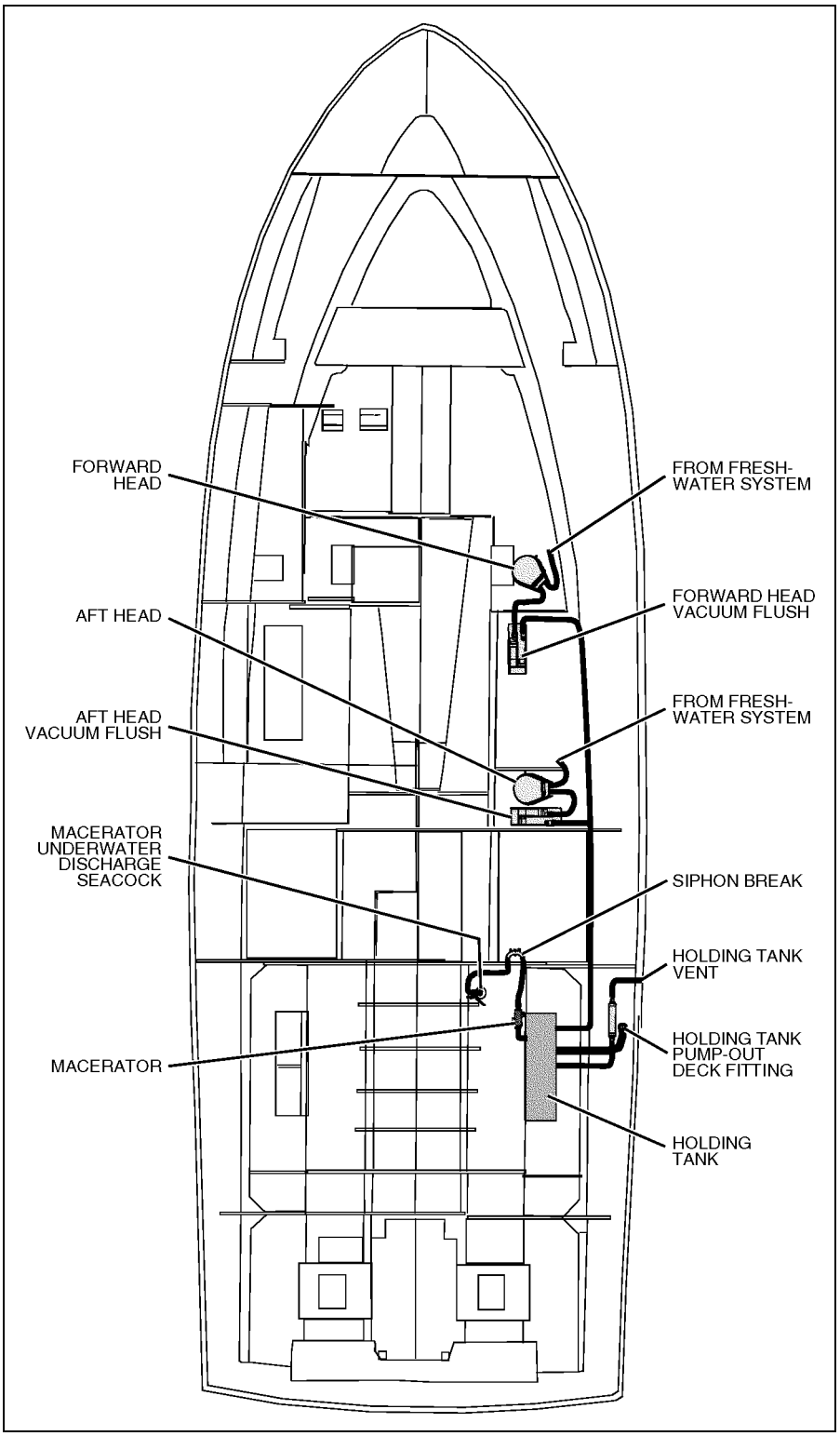
Read the marine head's operation and maintenance manual for winterizing instructions.

Macerator

To use the macerator to pump waste directly overboard (where laws permit):

1. ***Open*** the underwater discharge valve.
2. Press both macerator switches at the same time to run the pump.
3. Stop running the macerator as soon as the holding tank is empty.
4. ***Close*** the underwater discharge valve when you are done pumping.

- For the locations of the underwater discharge valve and the macerator switches, see the *Component Locations* section in *Chapter 2* of this *Owner's Manual.*



Chapter 7: Deck Equipment

Cleats

⚠ WARNING!

PERSONAL INJURY and/or PRODUCT or PROPERTY DAMAGE HAZARD!

***NEVER* lift your yacht using the cleats.**

Carefully read the section on towing in the *Cruiser & Yacht Owner's Manual Supplement* before towing anything behind your yacht or having your yacht towed by another vessel.

Windlass

⚠ DANGER!

PERSONAL SAFETY & PRODUCT DAMAGE HAZARD!

An unsecured anchor could accidentally deploy while your yacht is moving, damaging your yacht and causing serious injury or death.

After retrieving the anchor:

- **Secure the anchor with an anchor safety strap, or a chain stopper.**
- **Switch *OFF* the windlass circuit breaker to prevent accidental operation.**

⚠ CAUTION

PRODUCT DAMAGE HAZARD!

Do *NOT* rely on the windlass alone to hold your yacht at anchor. After setting the anchor, tie the rode off to a cleat or equivalent strong point.

Do *NOT* pull your yacht to the anchor using the windlass, or continue running the windlass if it has stalled or is overloaded.

- Read and follow the manufacturer's instruction manual ***before*** using the anchor windlass for the first time.
- The windlass can be controlled from a switch at the helm or from the deck foot switches.
- Make sure that the windlass circuit breaker is turned ***On before*** using the anchor windlass.
- To raise the anchor, use engine power (***not*** the windlass) to move your yacht to, and directly above, the anchor.
- Dislodge the anchor from the bottom by pulling it straight up with the windlass.
- ***Before*** getting underway, make sure the anchor is secured and the windlass circuit breaker is turned ***Off***.

Radar Wing

⚠ CAUTION

PRODUCT DAMAGE HAZARD!

- **When installing accessories on the radar wing, the maximum hole size diameter is 3/4 of an inch (0.75").**
- **Larger hole sizes will affect the structural integrity of the radar wing.**

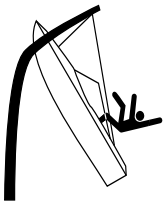
Davit

⚠ WARNING!

PERSONAL INJURY and/or PRODUCT or PROPERTY DAMAGE HAZARD!

- **Davit load *NOT* to exceed 750 lbs.**
- **Water is heavy. Lifting a dinghy to drain its bilge may exceed the davit's load limit. *NEVER* lift with water or loose objects inside.**
- ***NEVER* use the davit with a faulty cable or any damaged parts.**
- ***NEVER* use the davit in extreme weather or sea conditions.**
- ***NEVER* use the davit while your yacht is underway.**
- **Allow *ONLY* trained and responsible persons to use the davit.**

⚠ WARNING!



PERSONAL INJURY, FALLING HAZARD!

- ***ALWAYS* lock the davit in the upright position *BEFORE* use.**
- ***NEVER* allow passengers (including pets) in a suspended boat. Falling from a suspended boat may cause injury or death.**
- ***NEVER* lift people or lift objects over people. Clear the area around and beneath the lifting area *BEFORE* using the davit.**

⚠ WARNING!

PERSONAL INJURY, FALLING HAZARD.

- ***ALWAYS* rotate the davit arm slowly. Rotating the davit arm too fast could cause the davit arm to swing out of control.**
- **Deck surface may become wet and slippery. Use caution when launching and retrieving your dinghy.**

⚠ CAUTION

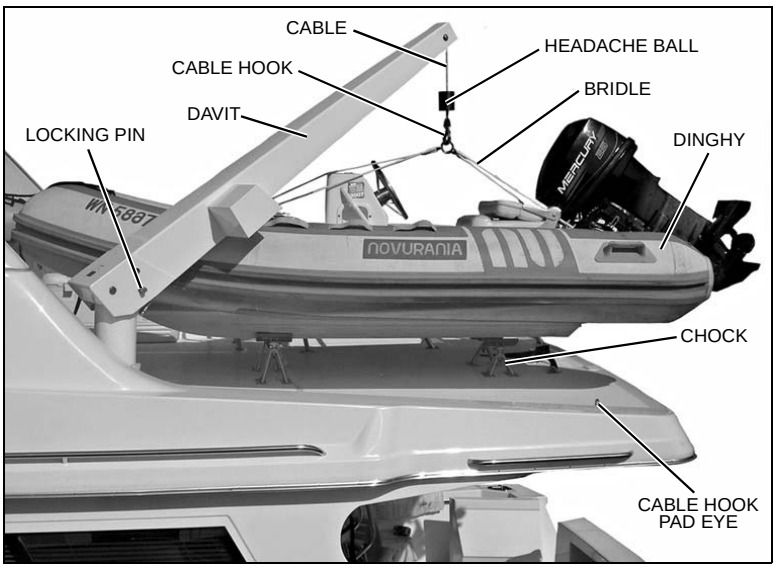
PERSONAL INJURY and/or PRODUCT or PROPERTY DAMAGE HAZARD!

- ***NEVER* alter the davit structure in any way.**
- ***NEVER* wrap lines around arms or hands.**

NOTICE

- ***BEFORE* using the davit, read the warnings on the previous page, familiarize yourself with the davit and its components, and read all information in this section.**
- **The davit does *NOT* have a separate operation manual.**
- **Since lifting bridles are unique to each type of dinghy they are not supplied by Meridian. Contact your dealer or supplier to obtain the correct bridle.**

Important Davit Operation Guidelines



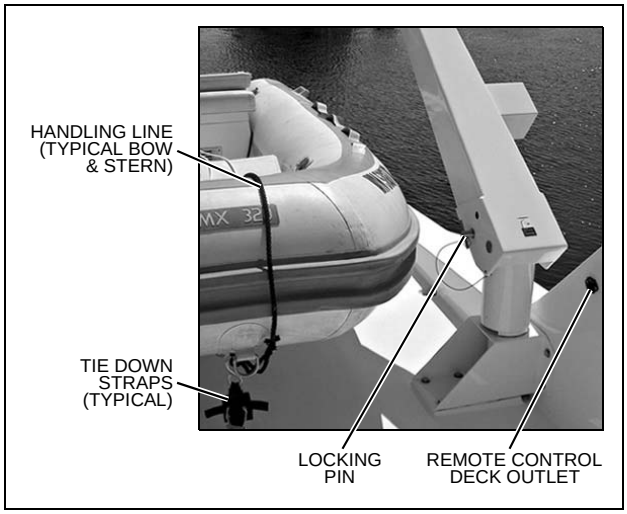
- Inspect the davit and cable before each use. ***Never*** use the davit if the cable is frayed, corroded or damaged.
- ***Never*** use the davit without the headache ball attached and suspended. The headache ball prevents uncoiling and snarling of the cable on the drum.
- Know the total weight being lifted and ***Do Not Overload!*** The davit is designed to lift dinghies or other small watercraft with maximum weights of 750 pounds including engine, fuel, and any lifting gear used on/with the dinghy.
- Rig your dinghy so that it launches and recovers level with the waterline. ***Never*** lift your dinghy when it is off-balance.
- ***Only*** use chocks specifically designed for your dinghy. Contact your dealer or supplier for chocks or other dinghy supports that best fit your needs.
- After your dinghy is safely back onboard, immediately secure it to the deck.

Dinghy Launching & Retrieving

NOTICE

Two people are needed for many of the steps listed in this section.

Launching



1. Turn the davit breaker ***On***. The davit breaker is located on the battery management panel inside the cabinet in the port aft corner of the salon.
2. Remove all tie down straps and any gear stowed inside the dinghy. Pump out any water, and insert the drain plug (if equipped).
3. If equipped, tilt the outboard motor to the ***Up*** position. NOTE: Keep the outboard tilted ***Up*** until the dinghy is safely in the water and the lifting bridle has been removed.
4. Attach bow and stern lines to the dinghy to help control the dinghy during launch and recovery.
5. Securely attach the lifting bridle to the lifting points inside the dinghy.
6. Assign one person to handle the bow and stern lines.
7. Plug the davit remote control into the deck outlet. The plug is indexed and will only go into the outlet one way. ***Never*** force the plug into the outlet.
8. Raise the davit arm into the ***Loading*** position by removing the locking pin from the ***Storage*** position hole (top hole), then lift the davit arm until you can slide the locking pin into the bottom hole. NOTE: Regularly grease the locking pin to help the pin slide smoothly into and out of the holes. If necessary, use a rubber mallet to help loosen the pin or to drive the pin into the holes.
9. Slowly rotate the davit arm over the dinghy.
10. Lower the cable by pressing the ***Out*** button on the remote control.
11. Attach the lifting bridle to the weighted cable hook.

12. Position the end of the davit arm directly over the balance point of the dinghy.
13. Take up the slack in the cable by pressing the ***In*** button on the remote control.
14. Double-check that the lifting bridle and cable are securely attached to the dinghy ***BEFORE*** lifting.
15. Lift the dinghy off the deck. NOTE: Do not raise the headache ball so far that it touches the upper pulley. This could cause damage to the cable, pulley, and davit.
16. Slowly rotate the davit arm until the dinghy is over the water.
17. Lower the dinghy to the water, rotating the davit arm as needed to keep the dinghy close alongside your yacht. NOTE: During launch and recovery, run the cable up and down smoothly, avoiding sudden starts and stops.
18. When the dinghy is safely on the water, continue to reel out the davit cable as the person controlling the handling lines guides the dinghy to the swim step platform, where it can be safely boarded. Step aboard, placing your first step as close to the center of the dinghy as possible while keeping your body weight low.
19. Release the lifting bridle ***from the cable FIRST*** and then from the dinghy.
20. Stow the lifting bridle securely.
21. Reel the cable back in and return the davit to the ***Storage*** position by removing the locking pin, lowering the davit arm, and inserting the locking pin into the top hole.
22. Secure the cable hook to the cable hook pad eye and reel in the cable until there is enough tension to keep the davit arm from swinging.
23. Unplug the remote control from the deck outlet and return it to storage.
24. Turn the davit breaker ***Off.***

Retrieving

1. Remove any gear and bail out any water from inside the dinghy.
2. If your dinghy has an outboard motor, tilt it to the ***Up*** position.
3. Attach the bow and stern lines to the dinghy.
4. Attach the lifting bridle to the lifting points inside the dinghy.
5. Turn the davit breaker ***On***.
6. Plug the davit remote control into the deck outlet.
7. Raise the davit arm into the ***Loading*** position by removing the locking pin from the ***Storage*** position hole (top hole), then lift the davit arm until you can slide the locking pin into the bottom hole.
8. Slowly rotate the davit arm outboard.
9. Lower the davit cable by pressing the ***Out*** button on the remote control.
10. Assign one person to the bow and stern lines to control the movement of the dinghy.
11. Let out enough cable so that when the cable is attached to the lifting bridle the wave action will not cause a 'snatching' motion. This type of motion is dangerous and can also damage your dinghy and/or the davit.
12. Position the dinghy directly under the davit arm so the dinghy will lift in a vertical direction with no sideways pulling.
13. Attach the cable to the lifting bridle.
14. Take up the slack in the cable by pressing the ***In*** button on the remote control.
15. Lift the dinghy high enough so that the bottom of the dinghy will not hit the command bridge deck or any chocks.
16. Slowly rotate the davit arm and dinghy inboard directly over the dinghy's storage position.
17. Lower the dinghy by pressing the ***Out*** button on the remote control.
18. Secure the dinghy to the command bridge deck. (See the Davit & Dinghy Storage section on the next page).
19. Unfasten the cable from the lifting bridle.
20. Return the davit to the ***Storage*** position by removing the locking pin, lowering the davit arm and inserting the locking pin into the top hole.
21. Secure the cable hook to the cable hook pad eye and reel in the cable until there is enough tension to keep the davit arm from swinging.
22. Unplug the remote control from the deck outlet. Return the remote control to its storage location.
23. Unfasten the lifting bridle from the lift points inside the dinghy and stow the bridle.
24. Unfasten the bow and stern handling lines from the dinghy and stow the handling lines.
25. Remove the drain plug (if equipped) from the dinghy.

Davit & Dinghy Storage

⚠ WARNING!

PERSONAL INJURY and/or PRODUCT or PROPERTY DAMAGE HAZARD!

***NEVER* operate your yacht unless the davit and the dinghy are in their proper storage positions.**

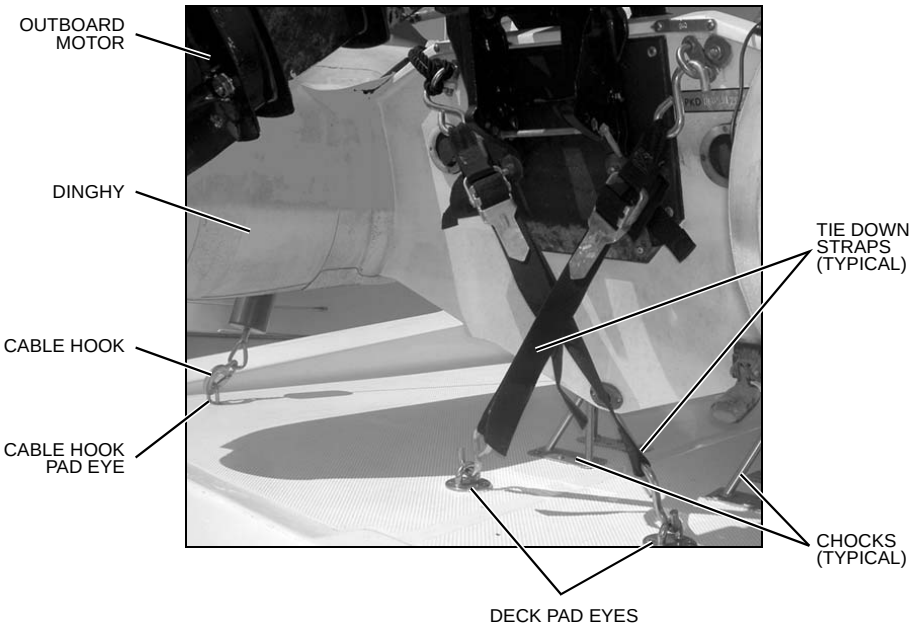
Davit Storage

- Store the davit with the davit arm down.
- Store the davit with the cable hook attached to the cable hook pad eye. Do ***Not*** store the davit by attaching the cable hook to the deck, a cleat, or a rail, and do ***Not*** leave the cable attached to the dinghy.
- Make sure there is enough tension on the cable to prevent the davit arm from swinging, leaving space between the headache ball and the pulley.
- Store the remote control in a clean, dry location. Do ***Not*** leave the remote control plugged into the deck outlet unless you are actively launching or recovering the dinghy.
- Make sure the davit breaker is ***Off*** when the davit is not in use.

Dinghy Storage

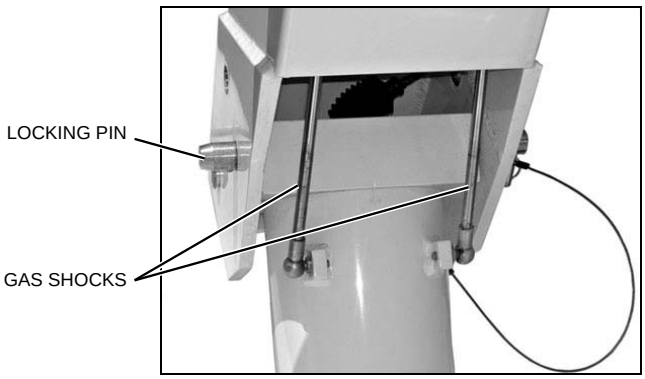
- Secure the dinghy to the deck pad eyes using tie down straps to prevent any movement. Do ***Not*** allow dinghy to remain on the davit and swing freely.
- Consult your dealer or supplier for the correct dinghy supports (such as chocks).

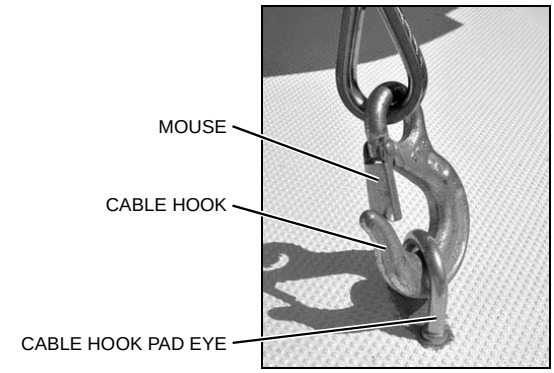
NOTE: VIEW IS AFT END OF DINGHY



Davit Maintenance Guidelines

- Inspect the cable regularly for breaks or frayed spots. Replace frayed or damaged cable immediately.
- Regularly wash the exterior of the davit with freshwater and soap. Do ***Not*** use harsh chemicals. **Make sure the davit breaker is *Off* and the remote control is unplugged before washdown. Allow the davit to dry before turning on electrical power again.**
- As needed, lubricate the gas shocks and the mouse on the cable hook with a light weight oil.
- As needed, clean the plug end of the remote control with a stiff wire brush and treat the plug end with corrosion guard or di-lectric grease.
- As needed, lubricate the locking pin with a small amount of grease.





Canvas & Vinyl Tops & Enclosures

⚠ CAUTION

PRODUCT or PROPERTY DAMAGE HAZARD!

Take down and securely stow *ALL* canvas & vinyl *BEFORE* your yacht is transported by road.

NOTICE

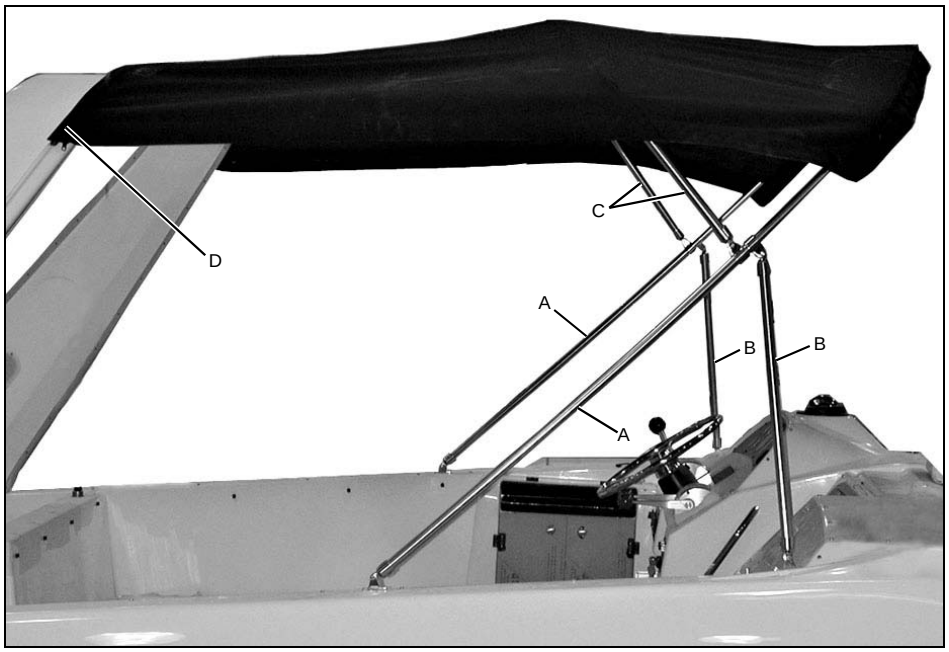
***BEFORE* cleaning and/or stowing your canvas or vinyl, read the sections later in this chapter, *Canvas Care* and *Clear Vinyl Care*.**

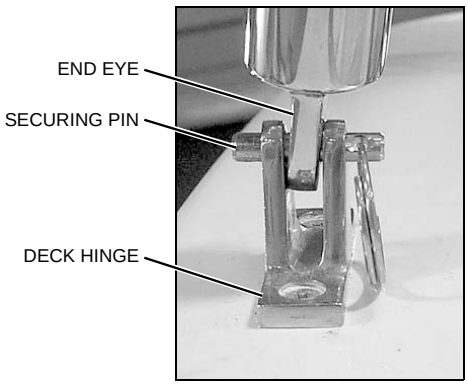
NOTICE

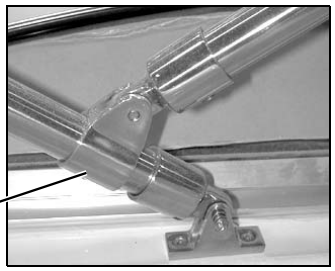
Two people are needed for most of the tasks listed in this section.

1. Insert the end eyes of the main bow (A) into the deck hinges and secure with the securing pins.
2. Insert the end eyes of the forward braces (B) into the deck hinges and secure with the securing pins.
3. Pull the secondary bows (C) aft and zip the aft end of the canvas top to the zippered track (D) on the radar wing.

- The jaw slides should ***not*** need to be adjusted.
- However, if you think the jaw slides need to be adjusted, obtain the measurements from your selling dealer.







Canvas Care (see also 'Clear Vinyl Care' on next page)

- After each use, especially in saltwater, rinse the canvas with cold freshwater.
- Before stowing, let the canvas air-dry completely.
- The canvas can be rolled or folded for stowage.

Cleaning the Canvas

⚠ CAUTION

***NEVER* use detergents when washing the canvas. Detergents can destroy the water repellency, and mildew/UV resistant finish of your canvas.**

Regularly clean the canvas to prevent dirt, pollen, and etc. from embedding in the fabric. Generally, it is easiest to wash the canvas while it is installed on your yacht.

1. Use a soft-bristled brush to remove all dust and loose dirt.
2. Hose down the canvas with freshwater.
3. Gently wash the canvas with a solution of lukewarm water (no more than 100° F) and non-detergent mild soap, such as Ivory Snow®, Dreft®, or Woolite®.
4. Rinse thoroughly to remove the soap.
5. Before stowing, let the canvas air-dry completely.

Stubborn Stains

⚠ CAUTION

- **Soaking in bleach solutions may remove the waterproof finish of the fabric and may also decrease the life of the polyester thread used in the canvas.**
- **If necessary, a water repellent treatment should be reapplied to your canvas. Ask your dealer about the treatments available for your yacht's canvas.**

Some stubborn stains may resist normal washing and you can try the following methods. However, these methods may remove the waterproof finish of the fabric and may also decrease the life of the polyester thread used in the canvas. Reapply a water repellent treatment as necessary.

Method 1

1. Add 1/8 cup (1 oz.) of **non-chlorine** bleach to one gallon of water and mix thoroughly.
2. Thoroughly wet the canvas and then gently scrub the stained area with the weak bleach solution.
3. Rinse with cold water to remove all of the solution.

Method 2

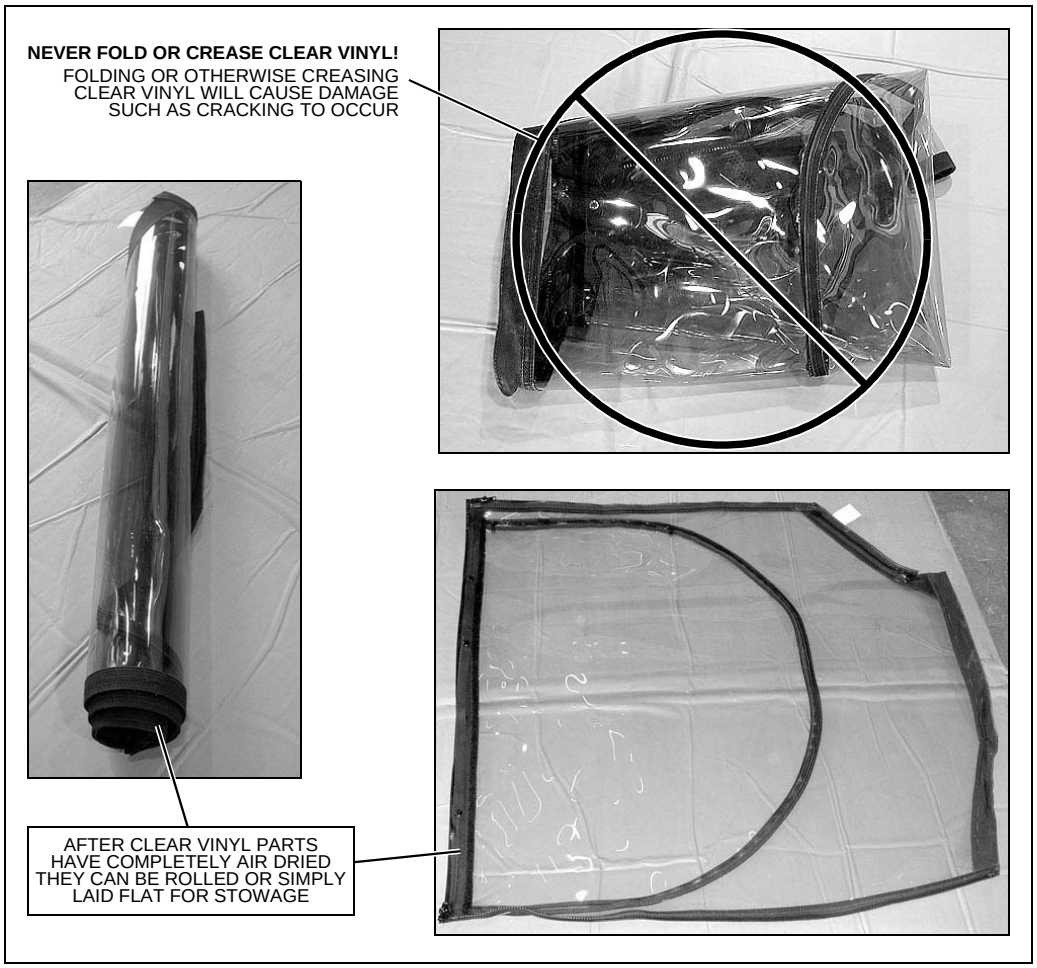
1. Add 1/2 cup (4 oz.) of **non-chlorine** bleach and 1/2 cup (4 oz.) Ivory Snow®, Dreft®, or Woolite® to one gallon of water and mix thoroughly.
2. Soak the canvas in this solution for about 20 minutes.
3. Rinse with cold water to remove all of the solution.

Clear Vinyl Care

⚠ CAUTION

- ***NEVER* store the clear vinyl pieces wet, as this will cause a milky film to develop.**
- ***NEVER* fold or crease the clear vinyl pieces as cracking will occur.**
- **Clear vinyl is *NOT* intended for use when your yacht is in storage or being moored.**
- **Clear vinyl does *NOT* hold up well against ultraviolet rays.**
- **Under direct sunlight conditions, do *NOT* let the clear vinyl touch the framework. The framework radiates heat and can burn the clear vinyl.**

- After each use, especially in saltwater, rinse the clear vinyl with cold freshwater.
- ***Before*** stowing, the clear vinyl must be completely dry. Air-drying is best, but you can also carefully dry the vinyl with a chamois or soft cotton cloth.
- The clear vinyl can be rolled or laid out flat for stowage.
- ***Never*** fold or crease the clear vinyl parts as cracking ***will*** occur.


NEVER FOLD OR CREASE CLEAR VINYL!
FOLDING OR OTHERWISE CREASING CLEAR VINYL WILL CAUSE DAMAGE SUCH AS CRACKING TO OCCUR
AFTER CLEAR VINYL PARTS HAVE COMPLETELY AIR DRIED THEY CAN BE ROLLED OR SIMPLY LAID FLAT FOR STOWAGE

Cleaning Clear Vinyl

Regularly clean the clear vinyl to prevent dirt, pollen, and etc. from marring the surface. Generally, it is easiest to clean the clear vinyl while it is installed on your yacht.

1. Hose down the clear vinyl with freshwater.
2. Using a soft cotton cloth **(paper towels are abrasive and should *never* be used on clear vinyl)**, gently wash the clear vinyl with soap and water.
3. Rinse thoroughly to remove the soap.
4. ***Before*** stowing, the clear vinyl must be completely dry. Air-drying is best, but you can also carefully dry the vinyl with a chamois or soft cotton cloth.

- Ask your dealer about products available to keep the clear vinyl polished and looking new.

Chapter 8: Appliances & Entertainment Systems

NOTICE

Always keep an approved ABC-type fire extinguisher in galley area.

All appliances and entertainment systems installed on your yacht come with their own manuals. These manuals contain detailed instructions and important safeguards. Read these manuals *before* using your yacht's appliances and entertainment systems.

- Make sure the 110-volt AC breaker is turned ***On*** for the appliance or entertainment system you wish to use.

Refrigerator

The refrigerator runs on 12-volt DC power *unless* 110-volt AC power is being supplied by shore power or generator power *and* the refrigerator's circuit breaker on the 110-volt AC master panel is ***On***.

Range/Oven

⚠ WARNING!

BURN HAZARD!

- **Do *NOT* touch stove burners, grates or areas near the stove units as they may be hot even when they are dark in color.**
- **Areas near burners and grates may become hot enough to cause burns.**
- **During and after use, do *NOT* touch or let clothing or other flammable material come in contact with heated units or areas near the units (burner tops, main frame sides and back, sea rails and pot holders) until they have had sufficient time to cool.**

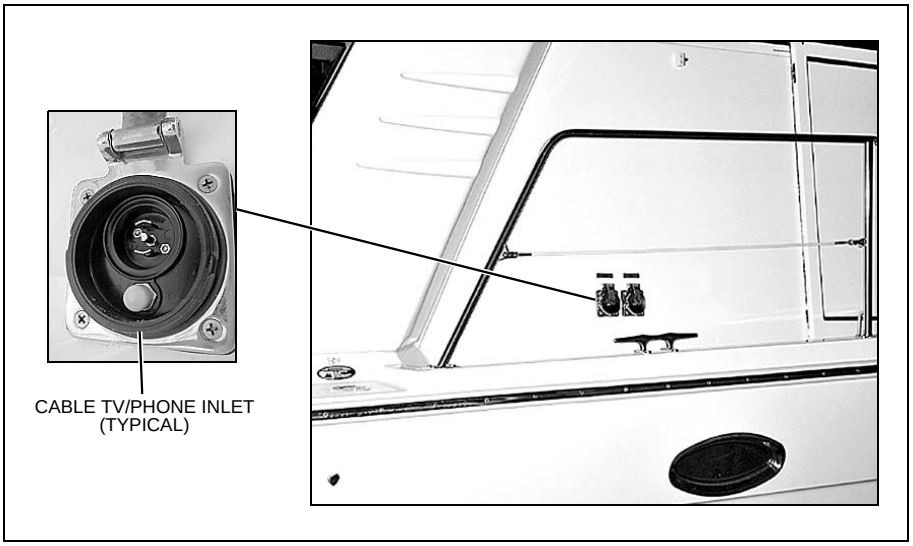
Audio & Visual Equipment

NOTICE

AM radio reception may be impaired anytime the engine is running.

Dockside Television & Telephone Inlet

Plug a dockside source into the TV/ telephone inlet if you want to watch cable TV or use a telephone.



Chapter 9: Lights

Care & Maintenance

All of the lights installed on your yacht are of top quality, but you should be aware that failure may periodically occur for a variety of reasons:

1. There may be a blown fuse - *replace the fuse*.
2. The bulb may be burned out - *carry spare replacement bulbs, making sure the wattage is correct.*
3. A wire may be damaged or may have come loose - *repair as required*.
4. The bulb base may be corroded - *clean the base and coat it with non-conductive electrical lubricant*.

Interior & Exterior Lights

⚠ CAUTION

- **Be conservative in the use of battery power.**
- **Prolonged use of cabin interior lights (overnight) *WILL* result in a drained battery.**

- The lights are powered by your yacht's 12-volt DC system.
- The battery switch must be in the ***On*** position for the lights to work.

Navigation Lights

⚠ CAUTION

Avoid the storage of gear where it would block navigation lights from view.

NOTICE

Running lights are legally required to show vessel direction and right-of-way at night.

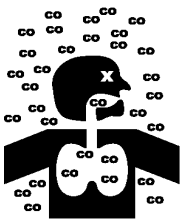
Spotlight

Read the spotlight's operating instructions ***before*** using the spotlight.

Chapter 10: Air Conditioning & Heating

Air Conditioner (If Equipped)

⚠ DANGER!



CARBON MONOXIDE POISONING HAZARD!

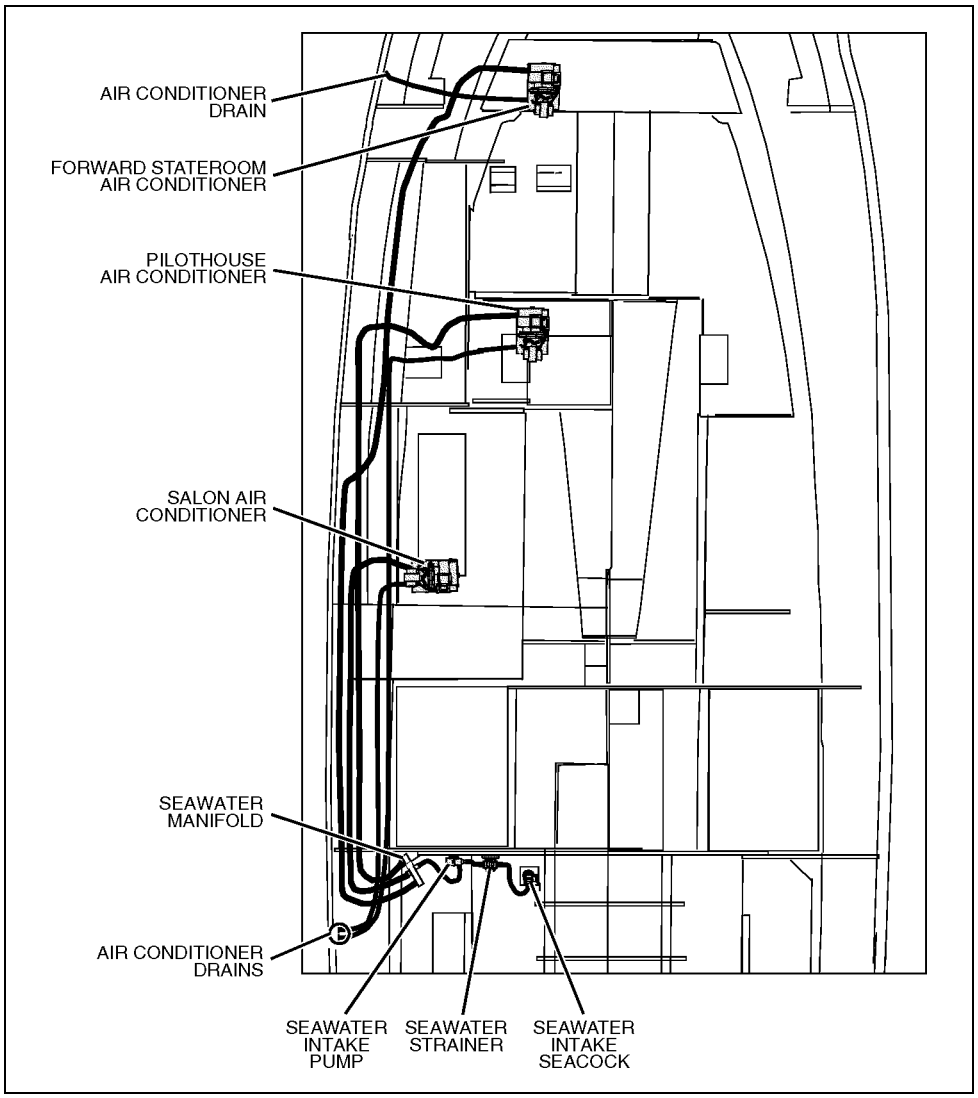
- **Dangerous carbon monoxide gas (CO) can be brought into your yacht through the air conditioning system.**
- **Read the *Carbon Monoxide (CO)* section of *Chapter 1* in this *Owner's Manual.***

⚠ CAUTION

SYSTEM DAMAGE HAZARD!

The air conditioning system's seawater intake seacock *MUST* be *Opened BEFORE* turning *On* the air conditioner and *MUST* stay *Open* during use.

- Read the air conditioner manual ***before*** using the air conditioning system.
- ***Before*** using the air conditioning system, make sure the breakers on the 110-volt AC master panel are turned ***On*** and that the system's seawater intake seacock is ***Open***.
- The seacock ***must*** remain ***Open*** while the air conditioner is in use.
- Check the seawater strainer for debris ***before*** each use of the air conditioning system.
- If the strainer needs to be cleaned out, follow the directions in the *Seawater Systems* section of *Chapter 6* in this *Owner's Manual*.



Electric Heaters

Your yacht features electric cabin heaters. Operating instructions for this system can be found in the manufacturer's instruction manual.

- ***Before*** using the electric heaters, make sure the breakers on the 110-volt AC master panel are turned ***On***.
- For the locations of the heaters, see the *Component Locations* section of *Chapter 2* in this *Owner's Manual*.

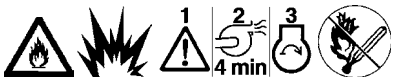
Chapter 11: Electrical Systems

⚠ DANGER!

EXTREME FIRE, SHOCK and EXPLOSION HAZARD!

- **To minimize the risks of fire and explosion, *NEVER* install non-ignition protected switches or other arcing devices in the fuel compartments.**
- ***NEVER* substitute automotive parts for marine parts. Marine electrical, ignition, and fuel system parts were designed and manufactured to comply with rules and laws that minimize the risks of fire and explosion.**
- **Do *NOT* change the electrical systems or relevant drawings.**
- **Allow *ONLY* trained marine electricians to install batteries and/or do electrical system work.**
- **Make sure that all battery switches are turned *Off BEFORE* working in the engine spaces.**

⚠ WARNING!



FIRE and EXPLOSION HAZARD!

Fuel vapors can explode! *BEFORE* turning on electrical devices or working on the electrical system:

1. **Check the bilge areas for fuel vapors or leaking fuel. If you see leaking fuel or smell fuel vapors:**
   a. **Do *NOT* start the engines or generator, do *NOT* turn *On* any electrical devices, put out *ALL* cigarettes, cigars, and other sources of flame or ignition.**
   b. **Get everyone off your yacht.**
   c. **Get trained help to find and fix the problem.**
2. **Run the bilge blowers for at least four minutes *BEFORE* engine starting, electrical system work, or turning on electrical devices.**

⚠ CAUTION

SHOCK and ELECTRICAL SYSTEM DAMAGE HAZARD!

When the engines are running, *NEVER* turn *Off* the main battery switches or disconnect the battery cables. Doing either could cause damage to your yacht's engines and/or electrical system components.

NOTICE

Electrical connections are prone to corrosion. To reduce corrosion-caused electrical problems:

- **Keep *ALL* electrical connections clean.**
- **Apply a spray-on protectant that is designed to protect connections from corrosion.**

12-Volt DC System

Batteries

- The batteries supply electricity for lights, 12-volt accessories, engine starting and generator starting.
- The *Electrical* section in *Chapter 8* of the *Cruiser & Yacht Owner's Manual Supplement* provides battery care and maintenance instructions.

Battery Switches

⚠ CAUTION

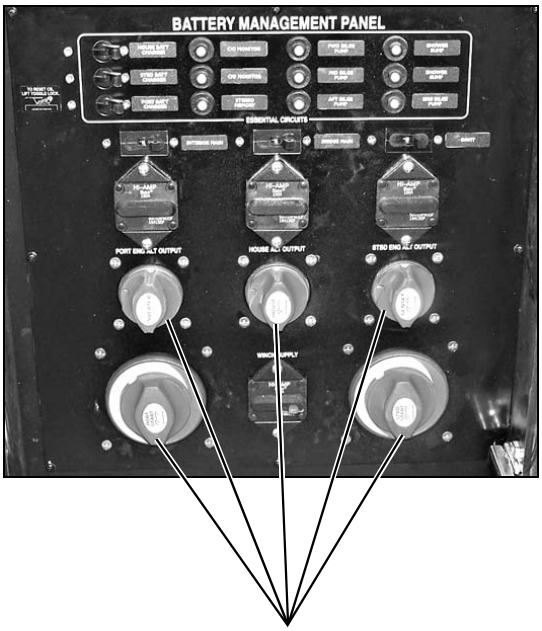
SHOCK and ELECTRICAL SYSTEM DAMAGE HAZARD!

When the engines are running, *NEVER* turn *Off* the main battery switches or disconnect the battery cables. Doing either could cause damage to your yacht's engines and/or electrical system components.

NOTICE

Make sure your selling dealer fully explains how to use the battery switches.

- A separate battery switch is provided for each battery (or battery bank). The battery switches are located on the battery management panel. (For the location of the battery management panel, see the *Component Locations* section in *Chapter 2* of this *Owner's Manual*).
- Standby-loads, such as the automatic bilge pumps and the stereo memory, are not affected by the battery switches since they are wired directly to the batteries.
- Turn the battery switches to the ***Off*** position whenever your yacht will be unoccupied for long periods of time.

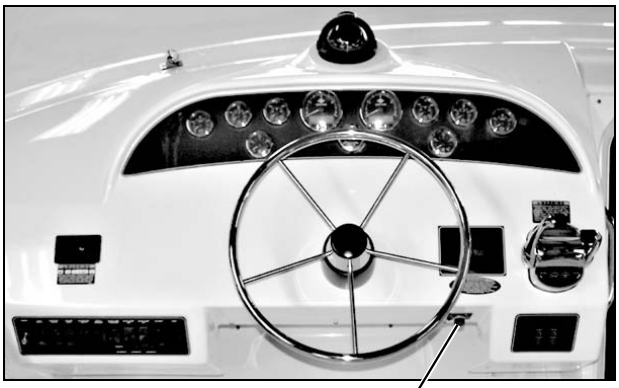


BATTERY SWITCHES

Emergency Battery Parallel Switch

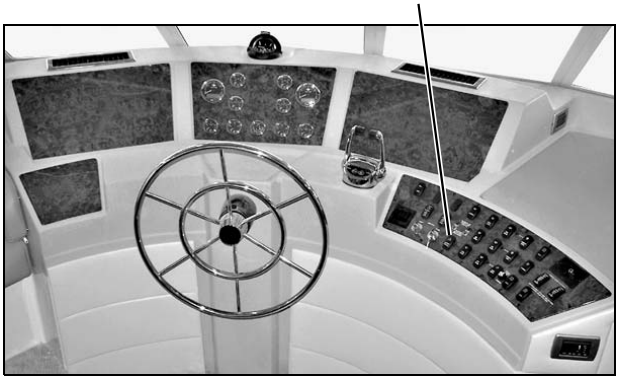
- If an engine will not start because of a dead battery, the battery parallel switch allows you to use the other batteries for engine starting.
- A battery parallel switch is provided at each helm (see photos on right).
- Emergency parallel switch instructions are provided on the *VSR Charging Module Information Sheet*.

COMMAND BRIDGE HELM



BATTERY PARALLEL SWITCHES

PILOTHOUSE HELM



Fuses & Circuit Breakers

The fuses and circuit breakers for the engines and main accessory power are on the following panels:

- 12-volt DC main distribution panel.
- Battery management panel.

For the locations of these panels, see the *Component Locations* section in *Chapter 2* of this *Owner's Manual*.

NOTE: Some equipment may have secondary fuse protection at the unit, behind the battery management panel, or at the batteries.

12-VOLT DC MAIN DISTRIBUTION PANEL

BATTERY MANAGEMENT PANEL

12-Volt DC Accessory Outlet

⚠ CAUTION

Do *NOT* use the 12-volt DC accessory outlet with a cigarette or cigar lighter. High temperatures may melt the outlet.

- The 12-volt DC accessory outlet can be used with any 12-volt device which draws 10-amps or less.
- The 12-volt DC accessory outlet is protected by a 10-amp fuse on the fuse block located behind the pilothouse helm.
- For the location of the 12-volt DC accessory outlet, see the *Component Locations* section of *Chapter 2* in this *Owner's Manual*.

Alternators

The engine alternators will keep the batteries properly charged when running at cruising speeds.

Battery Charger

⚠ CAUTION

ENGINE and ELECTRICAL SYSTEM DAMAGE HAZARD!

***NEVER* run your yacht's engines and the battery charger at the same time.**

⚠ CAUTION

- **The battery charging systems (alternator and battery charger) installed on your yacht are designed to charge conventional lead-acid batteries.**
- ***BEFORE* installing gel-cell or other new technology batteries, consult with the battery manufacturer about charging system requirements.**

- ***Before*** using the battery charger, read ***all*** instructions and warnings: (1) on the *VSR Charging Module Information Sheet*, (2) on the battery charger, (3) on the batteries, and (4) in the battery charger manual.
- The battery charger will automatically charge your yacht's batteries when 110-volt AC power is being provided by shore power or generator power, *and* the battery charger circuit breaker on the 110-volt AC master panel is ***On***.
- The battery switches can be in any position during charging.
- You may use DC powered electrical systems, such as the lights and stereo when charging the batteries**,** but there will be a corresponding drop in charger performance.

110-Volt AC System

⚠ WARNING!

FIRE and ELECTRICAL SYSTEM DAMAGE HAZARD!

If equipped with a generator, using both shore power and generator power at the same time *WILL* cause major electrical system damage and could start a fire!

- **The power source lockouts on the 110-volt AC master panel prevent the use of shore power and generator power at the same time.**
- ***NEVER* bypass the power source lockouts.**

⚠ CAUTION

WATER HEATER DAMAGE HAZARD!

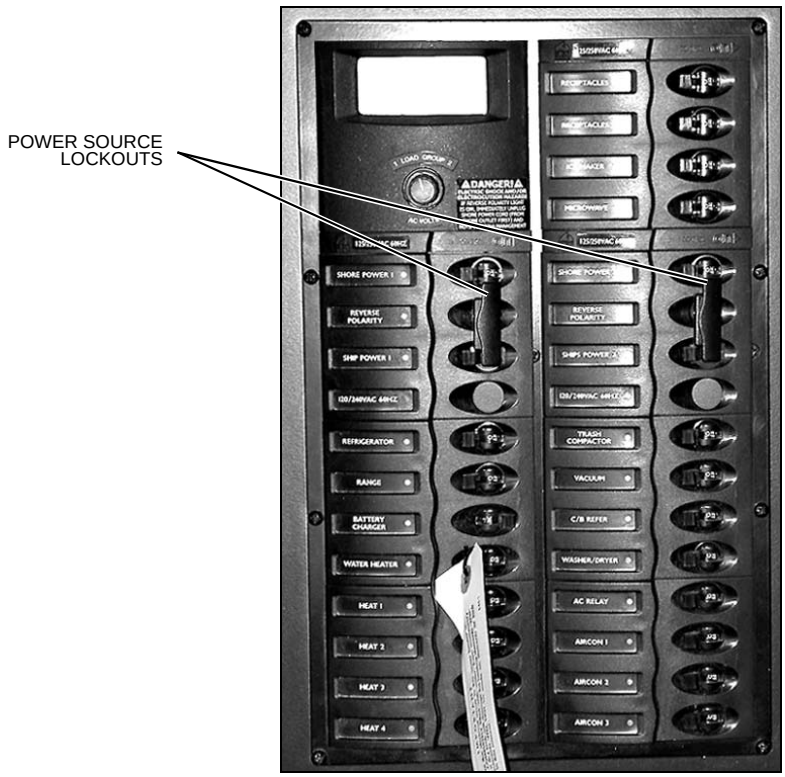
- **Do *NOT* turn *On* the water heater circuit breaker on the 110-volt AC master panel until the water heater tank is *COMPLETELY* filled with water.**
- **The tank is full if water flows from the tap when the hot water is turned *On* in the galley.**
- **Even brief water heater operation with a dry tank *WILL* damage the heating elements.**
- **Warranty replacements will *NOT* be made on elements damaged in this manner.**

NOTICE

- **Whether using shore power or generator power, using several 110-volt AC accessories at the same time can result in an overloaded circuit.**
- **You may have to turn *Off* one or more accessories to use another accessory.**

- To gain a basic understanding of your yacht's 110-volt AC system, read the handbook, *A Boater's Guide To AC Electrical Systems*. If this handbook is not in your owner's packet, call 360-403-2198 and the handbook will be mailed to you.
- The 110-volt AC system can be energized by shore power or generator power.
- The individual breakers on the 110-volt AC master panel ***must*** be turned ***On*** to supply power to the accessories you wish to use.
- The 110-volt AC master panel may contain circuit breakers for accessories that are not available for your yacht.

110-VOLT AC MASTER PANEL



Shore Power

⚠ DANGER!

FIRE, EXPLOSION and SHOCK HAZARD!

- **Use *ONLY* compatible shore power connectors and *NEVER* alter the connectors.**
- **Turn *Off ALL* breakers and switches on the 110-volt AC master panel *BEFORE* plugging in or unplugging the shore power cord.**
- **To prevent shock or injury from dropping a "hot" cord into the water:**
  - **a. *ALWAYS* plug the shore power cord into the yacht inlet first, and then into the dockside outlet.**
  - **b. When unplugging from shore power, *ALWAYS* unplug the shore power cord from the dockside outlet first.**
- ***NEVER* leave the shore power cord plugged into the dockside outlet *ONLY*.**
- ***ONLY* use shore power cords approved for marine use. *NEVER* use ordinary indoor or outdoor extension cords.**

⚠ WARNING!

SHOCK and ELECTRICAL SYSTEM DAMAGE HAZARD!

- **Monitor the polarity indicator lights *EVERY TIME* you connect to shore power.**
- **If a reversed polarity light turns on when you are connecting to shore power, do *NOT* turn on the main breaker switches.**
- **Instead, *IMMEDIATELY* unplug the shore power cord (*ALWAYS* from the dockside outlet first) and alert marina management.**

⚠ WARNING!

SHOCK and ELECTRICAL SYSTEM DAMAGE HAZARD!

- ***BEFORE* each use, check the shore power cord(s) for defects or damage.**
- ***NEVER* use damaged or faulty cords since the danger of fire and electrical shock exists.**
- **Do *NOT* pinch shore power cords in doors or hatches, or coil the shore power cord too tightly, since these situations can generate enough heat to result in a fire.**
- **If a shore power cord is dropped into the water, *COMPLETELY* dry the blades and contact slots *BEFORE* using.**

⚠ CAUTION

ELECTRICAL SYSTEM DAMAGE HAZARD!

- ***NEVER* connect to dockside power outside of North America unless you have purchased the international electrical conversion option.**
- **Using several 110-volt AC accessories at the same time can result in an overloaded circuit. You may have to turn *Off* one or more accessories to use another accessory.**
- **Use double insulated or three-wire protected electrical appliances whenever possible.**

- Your yacht is equipped with one (1) 220-volt/50-amp shore power inlet.
- The 220-volt/50-amp shore power inlet provides 110-volt/50-amp power to each shore power master breaker.

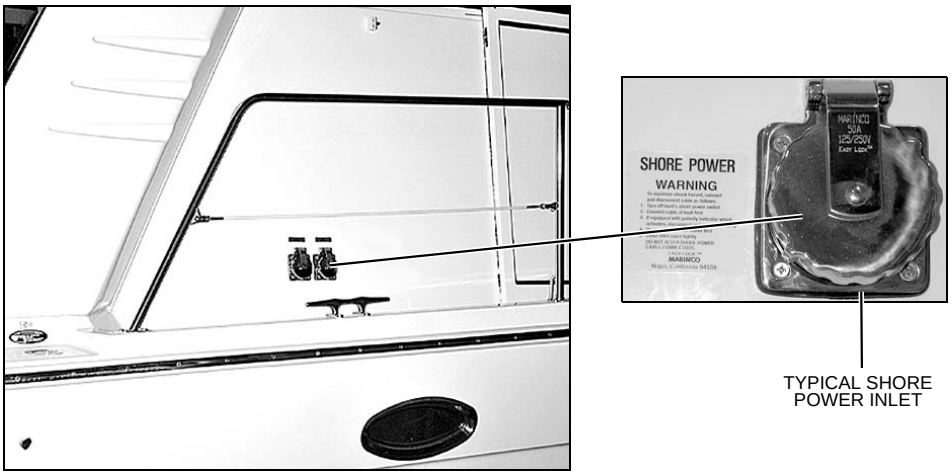
Connecting to Shore Power

⚠ WARNING!

SHOCK and ELECTRICAL SYSTEM DAMAGE HAZARD!

- **Monitor the polarity indicator lights *EVERY TIME* you connect to shore power.**
- **If a reversed polarity light turns on when you are connecting to shore power, do *NOT* turn on the main breaker switches.**
- **Instead, *IMMEDIATELY* unplug the shore power cord (*ALWAYS* from the dockside outlet first) and alert marina management.**

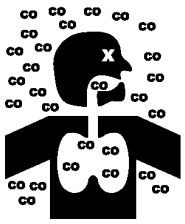
1. Review all hazard information at the beginning of this section, *Shore Power.*
2. Turn ***Off*** all breakers and switches on the 110-volt AC master panel.
3. Attach the shore power cord to the yacht inlet first, then to the dockside outlet.
4. Switch the SHORE POWER 1 and/or SHORE POWER 2 master breakers ***On***.
5. As needed, turn ***On*** the individual component breakers on the 110-volt AC master panel.



TYPICAL SHORE POWER INLET

Generator

⚠ DANGER!



CARBON MONOXIDE POISONING HAZARD!

- **Generators are a source of dangerous carbon monoxide gas (CO). Check the generator exhaust system for leaks *BEFORE* each use.**
- **Read the *Carbon Monoxide (CO)* section of *Chapter 1* in this *Owner's Manual*.**

⚠ WARNING!

FIRE and EXPLOSION HAZARD!

Fuel vapors can explode! *BEFORE* starting the generator:

1. **Check the bilge areas for fuel vapors or leaking fuel. If you see leaking fuel or smell fuel vapors:**
   a. **Do *NOT* start the generator or the engines, do *NOT* turn *On* any electrical devices, and put out *ALL* cigarettes, cigars, and other sources of flame or ignition.**
   b. **Get everyone off your yacht.**
   c. **Get trained help to find and fix the problem.**
2. **Run the bilge blowers for at least four minutes *BEFORE* generator or engine starting, electrical system work, or turning on electrical devices.**

- **If you smell fuel vapors and the generator is already running:**
  a. **Shut *Off* the generator and turn *Off ALL* electrical devices.**
  b. **Put out *ALL* cigarettes, cigars, and other sources of flame or ignition.**
  c. **Get trained help to find and fix the problem.**

⚠ CAUTION

SYSTEM DAMAGE HAZARD!

- ***ALWAYS* make sure the generator's seawater intake seacock is *Open BEFORE* starting, and during running of the generator.**
- ***NEVER* run the generator starter for more than 30 seconds. If the generator does not start, wait at least 30 seconds *BEFORE* trying again.**
- **After the generator starts, let the generator stabilize *BEFORE* turning *On* the component breakers on the 110-volt AC master panel.**

- When your yacht is ***not*** connected to shore power, the generator can supply 110-volt/60-hertz power.
- ***Before*** using the generator, read the generator operation manual for pre-start checks and break-in procedures.
- Refer to the generator manual for starting/stopping instructions.

Important generator notes:

- Polarity has been established in the installation of the generator. Therefore the polarity lights will ***not*** function in this mode.
- Fuel to run the generator is supplied from the starboard fuel tank.
- Periodically replace the filter on the generator to make sure it remains clean and free of debris.
- Diesel generators also have a fuel filter/water separator. Service instructions are provided on the fuel filter/water separator.
- The coolant mixture installed at the factory consists of equal parts of water and antifreeze (Ethylene Glycol).
- Check the generator's seawater strainer for leaks and/or debris ***before*** each use.

Important Records

Selling Dealer

Name Of Dealership

Address

Phone/FAX/E-mail

Sales Manager

Service Manager

Engines

Manufacturer | Model Name/Number

Port Engine Serial Number | Starboard Engine Serial Number

Oil Type/SAE | Quarts per Engine | Filter Type

Propellers

Manufacturer | Pitch

Model Number

Generator

Manufacturer | Model Name/Number

Serial Number

Oil Type/SAE | Quarts | Filter Type

Fuel System

Fuel Capacity | Filter Type

Plumbing

Freshwater Tank Capacity | Waste Holding Tank Capacity

Key Numbers

Cabin | Ignition

Other | Other

Electronics

Manufacturer | Model Name/Number

Serial Number

Manufacturer | Model Name/Number

Serial Number

Manufacturer | Model Name/Number

Serial Number

Manufacturer | Model Name/Number

Serial Number

Manufacturer | Model Name/Number

Serial Number

Manufacturer | Model Name/Number

Serial Number

Float Plan

Before leaving on each cruise, fill out a copy of this float plan (or similar) and leave it with a ***reliable*** person whom you can depend on to contact the Coast Guard or other rescue organization, if you do not return as scheduled.

Description of Yacht

Registration/Documentation Number

Length | Make | Type

Hull Color | Trim Color

Fuel Capacity | Engine Type | Number of Engines

Distinguishing Features

Distinguishing Features

Operator of Yacht

Full Name

Male or Female | Age | Health

Address

Address

Phone/FAX/E-mail

Operator's Experience

Persons Onboard

Full Name

Age | Health | Phone Number

Full Name

Age | Health | Phone Number

Full Name

Age | Health | Phone Number

Full Name

Age | Health | Phone Number

Full Name

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Age | Health | Phone Number

Survival Equipment

Number of PFDs	Flares (Yes/No)	Mirror (Yes/No)
Smoke Signals (Yes/No)	Flashlight (Yes/No)	Food (Yes/No)
Water (Yes/No)	Anchor (Yes/No)	Raft/Dinghy (Yes/No)
Paddles (Yes/No)	EPIRB (Yes/No)	Other
Other	Other	Other
Marine Radio (Yes/No)	Type	Frequencies

Vehicle Description

Make

Model

Color

License Number

Where is the Vehicle Parked?

Trip Expectations

Departing From

Departure Date

Departure Time

Stopover 1

Arrive No Later Than: Date

Arrive No Later Than: Time

Stopover 2

Arrive No Later Than: Date

Arrive No Later Than: Time

Stopover 3

Arrive No Later Than: Date

Arrive No Later Than: Time

Stopover 4

Arrive No Later Than: Date

Arrive No Later Than: Time

Stopover 5

Arrive No Later Than: Date

Arrive No Later Than: Time

Stopover 6

Arrive No Later Than: Date

Arrive No Later Than: Time

Final Destination Port (If Different Than Home Port)

Arrive No Later Than: Date

Arrive No Later Than: Time

If not returned by the date and time listed above, call the Coast Guard or other local authority.

Coast Guard Phone Number

Local Authority Phone Number

Owner’s Notes

Owner’s Notes

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